

Design Thinking as a Phenomenon

**Design Thinking as a Contemporary Phenomenon and
as an Object of Discussion**

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School of Art, Design and Architecture

International Design Business Management

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Abstract

Design thinking is fundamentally about how designers think and what tools and methods they use in their profession. During the past decade, design thinking has become a popular topic within design and especially business communities. Business leaders and managers have adapted design thinking as a part of their companies' innovation process and the business community has given a new flavour to the term. Design thinking has become an exceedingly discussed phenomenon in business and design-related media. This thesis aims to study how design thinking is understood in different domains, why design thinking became a phenomenon and especially why it became so prominent within the business and management community. The objective is also to discover how and why design thinking became a fad. Furthermore the aim is to understand the possible affects of design thinking phenomenon to the design community and domain.

A literature review was conducted for the thesis. The topic is based on instant history, therefore sources used are mainly online based: online business and design journal articles and blog posts. In addition to online sources, the literature review consists of books, journals and academia papers of fundamental key thought leaders for the purpose of this thesis. In addition, a handful of design and business professionals who deal with the term in their day-to-day profession were interviewed in order to support the research and to understand the variation of opinions regarding design thinking. It is discovered that design thinking became a contemporary phenomenon in the past decade and that it became a fad between 2008 and 2011. At least two separate discussion discourses are recognized, one in business domain and the other in design domain. It was found that the two discourses discuss and understand design thinking in different ways: the design discourse sees design thinking as a fundamental designer trait that mainly designers possess, when the business discourse understands design thinking more as tools and methods that can be adapted by anyone. Also, it is discovered that over time some of the key thought figures participating in the design thinking discussion change their original opinion on the value of design thinking. Furthermore, the principal conclusion is that design thinking phenomenon has enhanced the value of design for business and the general awareness of design profession. Business leaders and managers have given a great deal of attention to design tools and methods in order to create novel ideas and innovation within their companies. In addition, the visibility of design in media has increased the awareness of what design profession can hold in it and how design can enhance the value companies give to their customers with their products and services.

Keywords Design Thinking, Design, Business, Design in Business, Trend, Phenomenon

Contents

1. Introduction	6
1.1. Investigation background	7
1.2. Objectives of the study	8
1.3. Research approach and methods	9
2. Design thinking phenomenon	12
2.1. Literature review	13
2.1.1. <i>Design discourse</i>	15
2.1.2. <i>Business and management discourse</i>	18
2.2. Design thinking	22
2.2.1. <i>Key features of design thinking</i>	23
2.2.2. <i>Creativity and design</i>	25
2.2.3. <i>Rapid prototyping</i>	26
2.2.4. <i>Optimism in design</i>	26
2.2.6. <i>Creative problem solving</i>	28
2.2.7. <i>Multidisciplinary teamwork</i>	29
2.2.8. <i>Empathy</i>	29
2.2.9. <i>Holistic thinking</i>	30
2.3. Design thinking phenomenon within business domain	31
2.3.1. <i>Why business adapted design thinking</i>	34
3. Transformation within design disciplines	37
3.1. Fine line between service design, strategic design and design thinking	38
3.1.1. <i>Service design</i>	39
3.1.2. <i>Strategic design</i>	41
3.1.3. <i>Merging design disciplines</i>	41
3.1.4. <i>Case study: IDEO</i>	42
4. Contradictory design thinking	46
4.1. Design thinking as action	46
4.2. Lack of coherent meaning for the term	49
5. Questioning the phenomenon	54
5.1. Design thinking - something remarkably special?	55
5.2. Design thinking - a fad?	56
6. Conclusions	61
References	65
Interviews	69
Interviewees	69
Attachment 1: <i>Interview with Marco Steinberg.</i>	70
Attachment 2: <i>Interview with Anne Stenros and Dirk Schelders.</i>	92
Attachment 3: <i>Interview with Roger Martin.</i>	103
Attachment 4: <i>Interview with Emiliano Chinchelli.</i>	111

1. Introduction

Design thinking is fundamentally about how designers think and what tools and methods they use in their profession. During the past decade, design thinking has become a popular topic of general discussion within design and business communities. Business leaders and managers have adapted design thinking as a part of their companies' innovation process and the business community has given a slightly different meaning to the term. Before the phenomenon, design thinking was mainly studied by design researchers and the discussion of it was related to design rather than to the business realm. Even though design thinking has become an exceedingly discussed topic in business- and design-related media, there is no common understanding on how to describe it. Therefore this thesis aims to study how design thinking is understood in domains such as design and business, why design thinking became a phenomenon and especially why it became so popular within the business and management community. The objective is to find out why design thinking became such a trendy topic, if it is a fad, and if so, why. Furthermore, the aim is to understand the possible affects of design thinking phenomenon to the design community and domain.

A literature review was conducted for the thesis. The topic is based on instant history, therefore sources used are mainly online based: online business and design magazine articles and blog posts. In addition to online sources, the literature review consists of books and academic papers of fundamental key thought leaders for the purpose of this thesis. In addition, a handful of design and business professionals who deal with the term in their day-to-day profession were interviewed in order to understand the variation of opinions on what design thinking is. In the final chapter the key findings of this thesis will be conducted as conclusions.

1.1. Investigation background

The term design thinking began to appear in general discussion in business and management related media during the past decade. Business publications such as *Harvard Business Review*, *Fast Company* and *Bloomberg's Business Week* began to publish articles and online blog posts about something called design thinking and how it will help companies to create value to the products and services they offer for their customers. In the business and management realm, the term design thinking is associated with the creation of organizational and other intangible innovation such as service innovation. The process is based on the methods and tools designers use in their profession when designing. When the term began to appear in the business- and management-related media, design thinking was often presented as something novel and revolutionary, creating a buzz around it.

However, design thinking is not a new term. It was used the first time in the 1980s when Peter G. Rowe published *Design Thinking* in 1987. In the thesis Rowe studied the design process and intellectual activity of architects designing. Before Rowe, many design researches studied the way designers think and work, including what type of problems designers solve in their profession.¹ This earlier academic design research and discussion has mainly focused on the designers' intellectual creative process and professional work, whereas the general design thinking discussion over the past decade has focused on the tools and methods designers use when designing and how they can be brought to other fields of domain outside of design for various purposes. This phenomenon has formed a few key thought leaders on design thinking such as Tim Brown, the Chief Executive Officer (CEO) of world famous design consultancy *IDEO* and Roger Martin, Dean of *Rotman School of Management*. Their key thoughts are that whatever you do, you should and can think like a designer to create innovation and novel ideas.²

¹ Simon, 1969; Rittel & Webber, 1973; Lawson, 1980; Schön, 1983; Buchanan, 1992

² Brown, 2009; Kimbell, 2009; Martin, 2009; Lockwood et al., 2010

The starting point for this thesis was a blog post by Venessa Wong in Business Week online magazine in late 2009.³ In the article Wong wrote about how businesses are adopting design thinking and how design thinking is taught in design and business schools around the world. I began to wonder what is design thinking about and started to collect information on it. The problem was that I could not find a general explanation on what design thinking actually was. All the authors of articles and studies had different opinions of what design thinking was and how it should be used, and for what purposes. Bryan Lawson describes that the word ‘design’ is used in everyday life but it has particular meanings given by particular groups of people.⁴ I believe that design thinking can be assimilated to this: it has particular meanings given by particular groups of people and this thesis aims to understand the different meanings design thinking has to particular people.

1.2. Objectives of the study

Divided into six chapters, this thesis aims to illustrate the different meanings given to the term design thinking and seek out the reasons behind the design thinking phenomenon. In chapter two the focus is to understand the two different design thinking discourses: design and business and how differently they discuss design thinking. The literature review emphasizes on the earlier research and publications on design thinking and what has been said about design thinking before and after it became a phenomenon in the 2000s. In chapter two the key focus is also on how business and management domain adapted design thinking and who are key thought leaders. In order to understand the opinion differences between people with different backgrounds, a handful of business and design experts were interviewed. The objective for the interviews was to see if the interviewed professionals had very similar or very

³ Wong, 2009

⁴ Lawson, 2006

different views on design thinking. The results will be described throughout the thesis.

Chapter three is about design thinking in general; what are the key features of it, gathered from the literature reviewed. In addition chapter three will study how design thinking and some particular design thinking related design disciplines have gone through a transformation. The relations between these three will be studied in order to understand the similarities and differences. A case study of the design consultancy IDEO will be presented for IDEO's significance for the phenomenon.

Chapter four focuses on the controversy of design thinking concept, term and the phenomenon; critique will be presented. In chapter five the aim is to understand if design thinking is a fad or has been a fad, and if it has something special to offer. Chapter six concludes the thesis with conclusions.

Objectives of this study, listed:

1. To find and understand reasons for the design thinking phenomenon during the past decade:
 - Why design thinking became a popular topic of discussion during 2005 to 2012.
 - Why design thinking became particularly trendy within the business and management community.
2. Did design thinking become a fad and if so, why.
3. What are the affects of the design thinking phenomenon for the design domain and community.

1.3. Research approach and methods

In this thesis, the research focus is towards international discussion of the phenomenon of design thinking, based mainly in North America and Europe. The chosen method of this study is a literature review on the topic but the

main focus is on the general popular discussion. The popular discussion was studied through articles, blog posts, online forums, academic studies and books. The academic studies are chosen based on their significance on the formation of the term. For instance in the design domain earlier research from the 1960s to 1990s play a fundamental role in how the term and concept of design thinking has formed to what it is today. Also the more recent research was chosen in order to compare the two discourses within the same timeline. For the business and management discourse related literature review, a significant amount of business- and management-related articles and pieces were reviewed, emphasizing in the time period from early 2005 to end of 2012. Particularly this period of time is where most of the contemporary literature and material is from regarding design thinking.

The focus of this thesis is not to collect all the existing definitions of design thinking, but to better understand the reasons behind why the most used definitions and features are particularly used for describing design thinking. Therefore the literature was chosen mainly from the key thought leaders and from authors who have been participating the key discussion actively with their opinions, articles or in other ways in media (such as presentations, video interviews and writing blog posts). The design discourse related articles are chosen from design publications such as *Design Issues*, *Design Studies*, *Fast Company Design* and the more informal discussion, including blog posts from *Core77* and relevant personal blogs of design experts and professionals. Particularly in these journals and publications design thinking has been mentioned throughout the past decade and in design domain also before as will be noticed in the literature review. The business- and management-related articles were chosen for their active discussion regarding design thinking, from publications such as Harvard Business Review, Fast Company, Business Week, *Design Management Institute Review* (DMI Review) and other relevant sources such as personal blogs of the key people relevant to this thesis.

In addition to literature review, a series of interviews were conducted for this thesis in order to understand if design and business professionals with

different backgrounds have either very similar or very different opinions and viewpoints on design thinking. I wanted to have at least a few interviews because they give a direct opinion from the interviewee, and there is no editors or reporters in between the interviewer and the interviewee. Two of the interviewees were chosen by their activity and participation on the design thinking discussion (Roger Martin and Anne Stenros). The other interviewees were chosen for their professional background, meaning that they were experts in their domain (Emiliano Chinchelli, Dirk Snelders and Marco Steinberg). To have as many different points of views as possible, it did not matter if they had or had not been participating the discussion. All interviewees were already familiar with the term in some way. Interviewees were asked more or less the same questions in order to understand the differences and/or similarities within their answers. All five interviews are found as attachments of this thesis. Also two related discussions were conducted with Dan Hill and Olof Schybergson prior to the recorded interviews.

To support the reviews and interviews, some social media research was done to understand the design thinking phenomenon in a more holistic way. I have used *Google Trends* search to support my findings and to understand the timeframe of design thinking as a trend. Also the iPhone application *Instagram* was used in order to conduct image searches (by using the term design thinking) to understand how in general the people understand the term design thinking and how they use it.

2. Design thinking phenomenon

It has been said that a designer thinks differently than an engineer, a mathematician or an electrician. All the three mentioned require skills for creative problem-solving, understanding of how different things relate to each others, many times also out-of-the-box thinking in respected profession. All these things are used to describe design thinking. If everyone can process thoughts in a similar manner, then what makes people say that designers think differently? According to design researcher Nigel Cross, "design has its own distinct 'things to know, ways of knowing them, and ways of finding out about them'.⁵ And this is very much what design thinking is about: designers seem to have their own way of thinking and creative process, and they use tools and methods special to them to support the process. The design thinking phenomenon began when business and management related media started to publish articles on how new ideas and innovation can be created by thinking like designer and using the methods and tools designers use. This thesis aims to study when and why business and management discourse got excited about the "designerly ways"⁶ of doing and thinking. A set of opinions of the definition of the term and concept design thinking is presented, however all existing definitions will not be presented, only the definitions given by the literature review authors and people interviewed for this thesis. In the general discussion and literature there is lacking a consistent definition of design thinking and it is confusing as a term for the reason that the meaning and the significance of the term vary depending on who is discussing it. Individuals with different backgrounds tend to have different perceptions on the topic. To give a holistic understanding on design thinking, the chapter is divided into three parts: the chapter begins with a section where two discourses will be presented in form of literature reviews. The second part presents the key features and definitions of design thinking from the key figures in

⁵ Cross, 2007. 17

⁶ Cross, 2007

the phenomenon. The last part of the chapter studies why business and management community adapted design thinking.

2.1. Literature review

In order to understand the reasons behind the phenomenon, the term design thinking should be clarified: how it is discussed and perceived by different authors, what does it mean and what were the reasons to initiate the phenomenon. Since there are at least two separate discourses within the design thinking phenomenon related discussion (one in the design community and the other in business and management community⁷), they will be separated into design discourse and business and management discourse as their own parts of the literature review in order to understand the timeline and common tone of voice of the two discourses (see image 1). The literature for this thesis is chosen for its significance for the topic, and by the significance of the author for the topic. The authors are also chosen for their activity and participation on the discussion. Some authors are chosen for their frequent coverage in design thinking related research, meaning that various researchers of the topic refer to their work in their own studies. In the design discourse literature review this type of authors were found easily. The literature review covers discussion on design thinking from the 1960s when it first began to appear as a topic of discussion and studies in some form, but it is significant to note that Rowe used the term design thinking for the first time in the 1980s in his book *Design Thinking*.

For the reason that the design thinking phenomenon began in the 2000s, the literature used is mainly from the past decade. From the beginning of 2000s in the design discourse the key figures in the design thinking discussion are design researcher Cross and IDEO's CEO Tim Brown. Cross has studied design thinking for several years and his thoughts are referred in many design

⁷ Johansson & Woodilla, 2010; Hassi & Laakso, 2011

thinking related studies I have come across. Tim Brown is recognized in this study as one of the key figures involved in the design thinking phenomenon, as well as he has also been referred in the material I have studied for this thesis. Brown has also been active in terms of speaking in public about design thinking. In the business and management discourse, at least three main supporters are recognized: Roger Martin, who was also interviewed for this thesis, Helen Walters and Bruce Nussbaum. Roger Martin is seen as one of the key figures for the phenomenon for his active participation in the general discussion through articles in business and management related publications. Helen Walters is the editor of the magazine *Innovation and Design*, formerly known also a Business Week editor. Walters has participated and thriven the discussion forward with her articles and blog posts. For the same reason the Fast Company editor Bruce Nussbaum is thought to be one the key characters in design thinking when it comes to the general popular discussion, in which he has participated with his strong personal opinions on the topic. With these key thought leaders (of design thinking), a variety of other meaningful authors will be presented in the following sections, starting by presenting the design discourse and then moving to the business and management discourse.

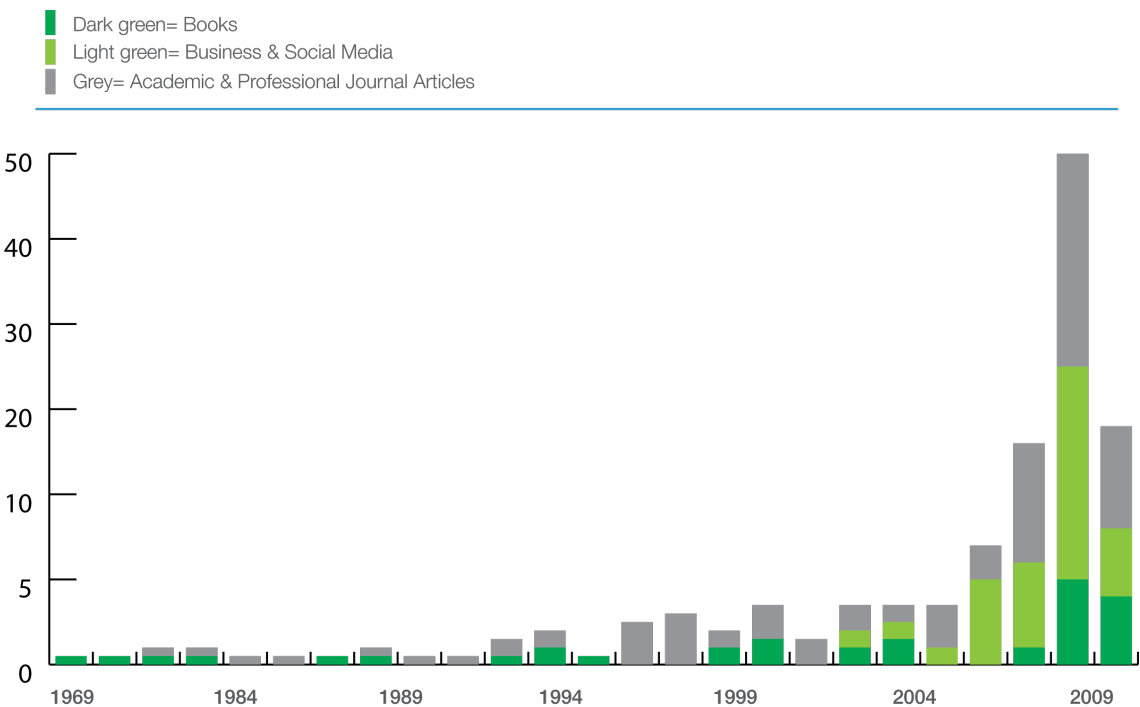


Image 1. The design thinking literature demographics from 1969 to 2009, according to Johansson & Woodilla. 2011

2.1.1. Design discourse

The literature reviewed for the literature review is mainly related to the term design thinking. This means that the book, study, article or blog post is somehow related to design thinking (headline, name, field of study). Some authors were significant for their appearance in studies and research conducted by design thinking related researchers.

The design discourse related articles chosen for this thesis are mainly from academic and professional design journals highly recognized by the design community such as Design Studies and Design Issues. Online magazines used are Core77, Fast Company Design and various personal blogs. Blog posts and personal blogs are used in order to get a variety of opinions related to the popular discussion. They were chosen by the significance of the author to the topic or by the significance of the blog post to the topic.

The academic discussion of design thinking has been around for nearly thirty years now⁸. Johansson & Woodilla refer to the design discourse way of describing design thinking as ‘designerly thinking’ and separate it from the design thinking phenomenon started by the business and managerial discourse in the 2000s. They believe that the design discourse is more focused on the designer’s professional practice and the theoretical framework of understanding designers and characterizing them.⁹

In the design discourse the earliest reference to design thinking is by Simon.¹⁰ He describes problem solving and design as a part of the domain of professions that are concerned with what ought to be (in stead of what is) in his book *The Sciences of the Artificial* in 1969. Simon believes that design is the creation of the artificial and that a person is designing when an existing situation is been changed (designed) to a preferred end result. Simon also emphasized in the importance of the understanding of the design process.¹¹

8 Johansson & Woodilla, 2011. 69

9 Johansson & Woodilla, 2011

10 Kimbell, 2011; Diethelm, 2012

11 Simon, 1969. 111-113

Another important figure in the history of design thinking within the design discourse is Schön who wrote how designers have a “conversation” with the moment when designing, Schön emphasises on the way designers construct the problems within the framework: meaning that the moment, materials and situation affect on the solution generation.¹²

However, probably the most significant milestone in the design discourse was when Rowe published *Design Thinking* in 1987. The significance of this study to the design thinking phenomena is in its history: Rowe was the first one to write about the designers’ way of thinking when designing by calling it design thinking. Although his study gave much attention to the profession of architecture, he spoke about designers and the study made applies to the design profession in general.

In the 1990’s Richard Buchanan wrote about “wicked problems” in design thinking in the design magazine *Design Issues* in 1992.¹³ Even though Rittel and Webber had already written about these wicked problems already in the 1960’s - 1970’s¹⁴, Buchanan’s article somehow revolutionized the design (thinking) discussion. Buchanan argued that design can be applied to everything (“to any area of human experience”¹⁵) and that most of the problems that designers deal with are the so-called wicked problems. Rittel also describes this type of problems in the following way: “class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing.”¹⁶ Rittel’s description of wicked problems accurately describes the kind of problems that designers really deal with in daily work: designers try to find creative and innovative solutions to problems that do not yet have solutions.¹⁷

Lawson published *How Designers Think – The Design Process Demystified* in 1980,

¹² Schön, 1983. 78-79

¹³ Buchanan, 1992. 5-21

¹⁴ Rittel & Webber, 1973. 155-169

¹⁵ Buchanan (2009, ed. Brody & Clark). 97

¹⁶ Churchman, 1967. 141-142

¹⁷ Cross, 2007. 27; Rowe, 1987. 40-41

and even though Cross's research is published later, they have the same topic emphasizing on how designer think and what is the design process. Lawson observed the designers at their work and he studied the design education at design and architect schools. Cross published his book *Designerly Ways of Knowing* in 2007. Cross studies mainly the designer's abilities and how designers act and think differently. He emphasizes that the designer's task is to not only to solve problems but also to "produce 'the solution'"¹⁸. Cross's approach to design thinking is very similar to Lawson's approach but Lawson refers many times to architects as designers, whereas Cross writes about designers with a more generalized view. In Cross's latest book *Design Thinking* in 2011, Cross takes an even more precise approach to how designers think with a focus on interdisciplinary design work. Lawson and Cross both believe that the design ability is to some extent special and that no matter what design domain the designer is working in, the design ability remains the same in all designers.¹⁹ Most of the authors mentioned agree that all human beings have natural design ability but through design education, professional experiences, and practices, some people become better in using this design ability.²⁰ The design research done on design thinking stands apart from the research done on the same term in the past few years: before 2000s the research was focused on reflections on how designer's practice design and think while designing and the research was done mainly by design researchers. In the research done after the 2000s the focus still remains on how designers think and the tools and methods used but in addition, there is another focus on how non-designers can learn from these methods, tools and thinking in order to apply them to their own professional domain. The difference to the earlier research is that the research published in the past few years are not done by design professionals but rather by people related to business and management. Even though there are exceptions: Brown - with an industrial design background - has been one of the most active spokespeople for

¹⁸ Cross, 2007. 23-24

¹⁹ Cross, 2007. 124

²⁰ Lawson, 2006; Cross, 2007

design thinking. Brown has his background in the design community, but he approaches design thinking as a method and a tool for organizations and business leaders to improve their business and to create innovations.²¹ Brown defines ‘design thinking’ as the next level of ‘design doing’ – referring to the traditional industrial design or graphic design - and suggesting that design thinking is a new approach suitable for everyone to design organizational changes, health care related services and client understanding²².

2.1.2. Business and management discourse

Apart from the design related literature, there are quite a few authors writing about design thinking outside of the design domain. The tone of voice of this discourse is different than how the design community and design researchers approach design thinking. As design management researchers Hassi & Laakso point out in their study, it seems that the management literature “offers design thinking as a cure to nearly every challenge in business”²³. In addition to Hassi & Laakso, Johansson & Woodilla claim that the design thinking has become a trendy term “in the executive and management realm”²⁴. The business and management discourse literature review is slightly different from the design discourse literature review because the term has not been used very often, if at all, before 2000s in the business and management context. For this reason, the literature reviewed was collected mainly from business and management related journals and magazines such as Business Week, Harvard Business Review, Design Management Review and Fast Company. The articles were chosen by the significance of the author to the topic or by the significance of the article or blog post to design thinking. In a similar manner as in the design discourse literature review, additional material was used such as documentaries,

²¹ Brown, 2009

²² Brown, 2009. 3-8

²³ Hassi & Laakso, 2011. 52

²⁴ Johansson & Woodilla, 2011. 68; Kimbell, 2011; Tjendra, 2012

video interview of the key figures for the topic and some personal blog posts that are significant for this topic in order to understand different opinions and views on design thinking.

Kimbell suggests in her study that the strategy specialist Mintzberg was one of the first ones to bring out the value of design in business in 1990 when he presented the ten schools of strategy; one of them being the school of design “with the approach that emphasizes the conscious activity of conceiving of strategic alternatives”²⁵. However, as a term and as a concept, design thinking began to appear in the management journals around the mid 2000s when Boland and Collopy discussed the management practice and education in 2004²⁶ as well as Dunne and Martin in 2006²⁷. In the paper, Dunne and Martin discussed design thinking and its affect on management education. Although at the time Martin referred design thinking also as integrative thinking, he basically meant the same thing.²⁸ In the same year, Borja de Mozota presented a value model in design management that emphasises the significance of design and bringing the designers and managers closer to each other’s. Borja de Mozota’s main argument is that design is important in creating innovation and value for business²⁹. Borja de Mozota also suggested already in 2006 that in 2005 there was a trend in favour of design in business and the management community³⁰. With Borja de Mozota, Nussbaum, key figure in the contemporary design thinking discussion, wrote in 2005 in *Business Week* that the emergence of China and India would force the American and European (and Japanese) major corporations to rethink their corporate strategies. He suggested in 2005 that, “Recently non-designers have begun showing greater interest in learning more about a field (design) so closely

²⁵ Kimbell, 2009. 2

²⁶ Boland & Collopy, 2004

²⁷ Dunne & Martin, 2006

²⁸ Dunne & Martin, 2006. 512-523

²⁹ Borja de Mozota, 2006

³⁰ Borja de Mozota, 2006. 44

associated with innovation”.³¹ Now writing for *Fast Company* and teaching as a professor of Innovation and Design at *Parsons The New School of Design*,³² wrote formerly a great deal of articles for *Business Week*, and many of his writings are also used as a part of research for this thesis. Interesting about Nussbaum is that he was one of the spokespeople for design thinking and then in 2011 he stated in an article that, “Design thinking is dead” and that it was a fad.

Since 2006, Martin has also been the key figure and spokesperson of design thinking in the business and management discourse. In 2007 Martin published a book, *The Opposable Mind*, on integrative thinking (coming up with various, opposing ideas and being able to create better ideas building on top of the earlier ideas)³³. In 2009, he wrote a book related to design thinking, *The Design of Business*, in the same year as Brown published his book *Change by Design*. In the interview for this thesis, Martin notes that they both knew about the books they were writing at the time and he thought, “They are complimentary to one another”. In the interview Martin also mentioned that he felt that *The Design Of Business* was a continuation to his first book, “In that book I said that when faced with an unpleasant either/or choice, integrative thinkers come up with a better solution. And that is a creative act. I felt that it was important for me to explain more about that creative act of coming up with something new that does not now exist”. Martin suggests that “abductive reasoning” (the logic of what might be) and integrative thinking are a part of design thinking. Martin believes that managers and business leaders should get familiar with design methods and the designerly way of thinking in order to create innovation and novel ideas.

The President of *Design Management Institute* Lockwood is in the similar lines with Martin. Lockwood edited a book called *Design Thinking* in 2010.

31 Nussbaum, 2005

32 *BusinessWeek*, 2013. <http://www.fastcodesign.com/users/bruce-nussbaum> Accessed 11.10.2013

33 Martin, 2009; Hassi & Laakso, 2011. 52-62

Lockwood implies that design thinking is something where right brain thinking is combined equally with left-brain thinking. He claims that “Businesses need to be ambidextrous: think from both sides”. Lockwood believes that design thinking is the perfect way of working. Apart from Martin, Lockwood writes about integrative thinking. In Lockwood’s opinion, design thinking has a few fundamental methods, which are collaboration, embedding diverse points of view and integrative thinking.³⁴ Lockwood has gathered almost thirty people from management and design domains to write about design thinking and its levels and benefits. In his book, design thinking is connected to topics such as business design, design management, brands and innovation, service design and customer experience design.

Helen Walters, the editor of *Innovation and Design*, has written various articles on design thinking during the more recent years and she (with Nussbaum) has brought design thinking to the readers of *Business Week*, as a part of the innovation discussion. In 2009, Walters wrote about why design thinking matters and mentioned also Martin as one of the key figures in the design thinking discussion.³⁵ Walters was chosen for the literature review especially for the fact that around 2009 she wrote pro-design thinking blog posts and articles, and in 2010-2011 she changed her tone of voice to more critical when writing about design thinking.

In the recent years a few rather significant academic papers have been written by Aalto University management researchers Hassi & Laakso, who based their research also on Johansson’s & Woodilla’s, professors in design management at the University of Gothenburg, research on design thinking. Johansson & Woodilla point out that there are at least two major discourses in design thinking: the academic and the managerial discourse. The managerial discourse is closely related to the creation of innovation and is a way for managers to understand design.³⁶ Hassi & Laakso on the other hand simplified the two

³⁴ Lockwood et al., 2010. ix-x

³⁵ Walters, 2009

³⁶ Johansson & Woodilla, 2011

discourses to design discourse and to management discourse ³⁷, and also their way of separation of these groups is used also in this thesis, but in stead of managerial discourse I prefer to use business and managerial discourse; I believe design thinking has widen from the management level to other domains of business, for example to the business schools. In addition to these studies, also Kimbell is one of the key design thinking researchers. She believes design thinking can be discussed in a different manner, or at least called in a different way (design-as-practice and design-in-practice), “As an alternative to design thinking, the pairing of design-as-practice and designs-in-practice moves the unit of analysis away from the individual designer or user, or the organization, to a wider frame which refocuses the research agenda”. ³⁸

2.2. Design thinking

As noticed in the literature review, there is a great a deal of people discussing it and giving the opinion about it publicly. Regardless of the differences in opinions, “Design thinking has been used for characterizing what individual designers know, and how they approach and make sense of their work, as well as how they actually do it”, Kimbell explains³⁹. In short, design thinking is what designers do and how they think when designing.

There are some certain attributes that design thinking is thought to consist of, and they will be presented in this chapter. These attributes apply mainly to what attributes design thinking phenomenon has brought out; what are the most common features mentioned in the literature and media. These attributes are for instance the ability to visualize ideas, multidisciplinary teamwork, problem solving (solving ill-defined problems), rapid prototyping and empathy for end-users. In the following text the focus is on defining

³⁷ Hassi & Laakso, 2011

³⁸ Kimbell, 2009

³⁹ Kimbell, 2011

what are the key features of design thinking from different points of view. The methods of design thinking are important to understand, since no design thinking exists without the doing. Designers are claimed to learn by doing and therefore the thinking evolves while doing and vice versa.⁴⁰ What appear to be the key features of design thinking are gathered from the literature reviewed and from the interviews as short summaries in the following pages.

2.2.1. Key features of design thinking

As mentioned already, there are at least two design thinking discourses. Hence the opinions and definitions of design thinking vary depending on the discourse and the person discussing it. The business and management discourse often describe design thinking as a tool and a methodology for innovation and creation of novel ideas. It is described as sort of complementary of analytical thinking for managers and business leaders and it can be applied to anything.⁴¹ Lockwood describes design thinking as, “Essentially a human-centred innovation process that emphasizes observation, fast learning, visualization of ideas, rapid prototyping, and concurrent business analysis, which ultimately influences innovation and business strategy. The objective is to involve consumers, designers, and businesspeople in an integrative process, which can be applied to product, service, or even business design.”⁴² Lockwood together with Cooper and Junginger, emphasizes that design thinking is not a new concept or practice and that, “It has been with and around us ever since there was design, conscious or unconscious. But some of the current interpretations offer new nuances, and that does have an impact on how we practise and theorize about design.” Lockwood, Cooper & Junginger also describe design thinking as a key activity.⁴³

⁴⁰ Lockwood et al., 2010. 59-60

⁴¹ Kimbell, 2009

⁴² Lockwood, ed. 2010

⁴³ Lockwood, ed. 2010

Brown is sort of in the middle of the two discourses, because he emphasizes much also on business when describing and discussing design thinking. The key thought of Brown is to combine business, technology and design. Design thinking plays a relevant role in doing this. Brown describes design thinking in the following way:

“Design thinking begins with skills designers have learned over many decades in their quest to match human needs with available technical resources within the practical constraints of business. By integrating what is desirable from a human point of view with what is technologically feasible and economically viable, designers have been able to create the products we enjoy today.

Design thinking takes the next step, which is to put these tools into the hands of people who may have never thought of themselves as designers and apply them to a vastly greater range of problems.

Design thinking taps into capacities we all have but that are overlooked by more conventional problem-solving practises. It is not only human-centred; it is deeply human in and of itself. Design thinking relies on our ability to be intuitive, to recognize patterns, to construct ideas that have emotional meaning as well as functionality, to express ourselves in media other than words or symbols.”⁴⁴

One of the interviewees, Stenros, the design director of Kone, believes that the concept of design thinking reflects any kind of creative approach in a systemic way. Cross on the other hand believes that design thinking is “built” in everyone, it is “Inherent within human cognition” and a key part of what makes people human.⁴⁵

In the following section the key attributes of design thinking (especially within the design thinking phenomenon) are presented.

⁴⁴ Brown, 2009

⁴⁵ Cross, 2011

2.2.2. Creativity and design

In order to explain what design thinking is, the term creativity has to be understood at least until some extend because design activity is often referred as something creative. Cross emphasizes that creativity is, “Widely regarded as an essential element in design thinking”⁴⁶. Fundamentally many of the methods designers use, can be described as ‘creative’. Sketching and prototyping the ideas can be used as an example: in order to get the idea “out of the head”, the designer has to visualize it. So sketching is a form of visualization: trying out different options and placing them side-to-side on the paper or on the computer screen. Sketching is also a thinking process: the designer visualizes the idea in his or her mind, then makes decisions on which of the ideas seem feasible. Then by looking close enough what the designer had in mind the best idea is selected for further development.

Everyone does this in a way in everyday life. All people are creative up to some extend, and because they make decisions and evaluate them continuously, and someone could claim that everyone is a designer, as Victor Papanek stated in the 1980s⁴⁷. All people are reasoning in their everyday routines: they solve problems and try to make sense of events around them. It is usual for people to imagine how things could be if they would do something differently. But here lays the difference with non-designers and designers: not everybody thinks about the “what-could-happen-if” scenarios when making decisions. This is what designers do especially in their professional design work. They think about what would happen if they try things in another way, or what would happen if they combine various things as one, and then they think about the consequences following these created combinations. Lawson notes that designers have to continuously direct their thought process into a certain direction, trying to find the solution for a problem.⁴⁸ Non-designers on the other hand do not do this normally consciously; they let their mind wonder

⁴⁶ Cross, 2007. 107

⁴⁷ Papanek, 1984. 3

⁴⁸ Lawson, 2006. 141

more freely. In some professions the thought process works in a similar way as the designer's process (for example consultants in different areas of expertise have to try to find a solution for the same type of problems as the designers do). Designers will take the thinking to the prototyping and iteration phase.

2.2.3. Rapid prototyping

For industrial designers the most important thing is to prototype and to iterate their ideas. In the manufacturing industry, prototyping saves resources - time and money - because the final product has been proved to work many times before the mass production phase. During the last decade the meaning of prototyping has began to be used in domains outside of design, but also to fields of design which did not use prototyping as a method before. Different prototyping methods are now used for practically everything. In service design there are various methods for service prototyping: storytelling, creating the service with Lego's and trying it in a game-like way. Services can be quickly prototyped in place with using whatever in hand and acting it out. Digital design (web design, mobile application design) has become important domain in design; their prototypes can be created from the visualized screens and just by inserting them as images in a phone. There are companies such as *AppGyver*⁴⁹ and *Buzztouch*⁵⁰ dedicating in creating this type of rapid prototyping method, but instead of sending images to phone, they use quick coding to test the phone applications directly in the phone.

2.3.4. Optimism in design

Creativity is not only about sketching and prototyping. Thomas Alva Edison

49 AppGyver 2013. <http://www.appgyver.com> Accessed 30.03.2013

50 Buzztouch 2013. <http://www.buzztouch.com> Accessed 30.03.2013

once said, that genius is one per cent inspiration and ninety-nine per cent perspiration. The ultimate idea behind being creative in design business is to create something original and or novel. The best idea does not often come as a “eureka moment” for designers as many people think, but actually designers work hard to get to the final - best idea - which will be created into a product or a service in the end.⁵¹

Most of the designers seem to have an optimistic approach when designing even if they sometimes struggle to be productive. Cross explains that the designers appear to be highly motivated and willing to take risks in their professional work. This includes a certain type of self-confidence of course; working under a pressure to come up with novel ideas requires optimism and determination.⁵²

2.3.5. Imagination

Some design researchers have come to a conclusion that most of the designers possess particular personality characteristics. Apart from self-confidence and optimism, designers are also very imaginative and have a certain type of intelligence, which cannot be perceived only through design education.⁵³ It is already in the person's traits.⁵⁴ Lawson borrows from one of the forerunners of cognitive psychology, Frederic Bartlett in referring to imagination also as ‘adventurous thinking’⁵⁵. Imagination and creativity go hand-in-hand together but creativity is more about imagining what could be and finding ways to conceive it whereas imagination is more about fantasising and daydreaming about what could happen even though it is not possible.

51 Lawson, 2006. 145- 146

52 Cross, 2011. 68-70

53 Cross, 2007 & 2011, Lawson, 2006

54 Lawson, 2006. 151- 153

55 Lawson, 2006. 141

2.2.6. Creative problem solving

Creativity plays an important role in problem solving in design work. As earlier mentioned, there is something called ill-defined or wicked problems that the designers have to deal with in their professional work. Practically all design thinking related authors refer in some way to these wicked problems. Especially in the management discourse one of the fundamental features in design thinking is especially the designer's ability to solve complex problems that do not have one right solution but multiple possible good solutions.⁵⁶ The ill-defined or wicked problems are more and more common in different fields of business and many design consultancies have moved their field of expertise to the direction of service design to tackle these complicated problems, which cannot be always resolved with traditional design methods. Cross explains that the designers take a broad systems approach to the problem, then they frame the problem in a different and even personal way.⁵⁷ This means that when designers are brought up with a problem, they tend to first reframe and simplify the problem. Then they try to see the problem from different perspectives, from the user's point of view and as well as from their client's - which usually is the company providing the service or product to the end-user- point of view. It takes imagination and creativity to try to ask the right questions from different perspectives. Perhaps for this reason the management and non-designer community has taken a great deal of interest in design because the ill-defined problems are something that can be solved better with multidisciplinary team work and hence there is no need to be a designer to tackle the problems when working together with designers.

⁵⁶ Brown, 2009, Martin 2009, Lockwood et al. 2010

⁵⁷ Cross, 2011. 75

2.3.7. Multidisciplinary teamwork

As mentioned in the previous section, teamwork is held as one of the core features of design thinking. This means that teamwork is not only teamwork between designers but it is multidisciplinary teamwork, where every team member gives their distinctive opinion and perspective through their own area of expertise. As Brown mentions, teams have always been around but for design thinking the special ingredient is the fact that each team member represent different field of expertise, from graphic design to human sciences and civil engineering.⁵⁸ Many design thinking spokespersons have an idealistic thought of business leaders and managers becoming designers and vice versa when they are put in a team together to build a product or a service.⁵⁹ For this reason there are now many design and business schools offering this type of multidisciplinary approach. For example the Stanford Institute of Design at Stanford University was founded in the School of Engineering in 2005 to become the design thinking school that fosters creativity and t-shaped people who can deal with all sorts of projects beyond the typical design projects.⁶⁰

2.3.8. Empathy

From design and management discourse, many people mention the word ‘empathy’ when describing design thinking. It is obvious that designers do have some sort of emotional intelligence and empathy for the people they design for. Without empathy designers probably would not understand to whom they are designing for and what kind of goods and services or features the user needs. However designer’s empathy is not always an evident characteristic. One of the interviewees for this thesis emphasized it as a trait for a good designer, but did not consider it as a key characteristic for a designer. Whether

⁵⁸ Brown, 2009. 26

⁵⁹ Brown, 2009, Martin 2009, Lockwood et al. 2010

⁶⁰ Stanford Institute of Design: <http://dschool.stanford.edu/about/> Accessed 15.01.2013

a good or intermediate designer, designers do seem to be more empathic than non-designers. Since a ten-year-old girl is different from a designer male of 35 years, it is obvious that designers have to do user research to understand the user's needs. The methods used are already somehow thriving towards a more empathic approach. Getting to know the cultural background of the user, following the user's behaviour in certain situations and understanding how the user feels when going through something, for example when being in a hospital. Designers observe and take notes and base their design approach on the observations. Rather than asking the users what they want but understanding the value for the user is substantial and requires empathy more than anything.⁶¹

2.2.9. Holistic thinking

From observing the user, the designer needs to move rapidly and effortlessly to do detailed design. To a greater extend the design work is also about seeing the big picture. Holistic thinking is something that many authors from the management and business discourse seem to see as a key feature in design thinking.⁶² Holistic thinking is about seeing bigger entities and about understanding all possible stakeholders involved when it comes to a design project. It is not enough to just understand the end-user; it is about understanding all touch points from the fuzzy-front end to design strategies and service providers who deal with the end-user.

⁶¹ *Stanford Institute of Design: <http://dschool.stanford.edu/about/> Accessed 15.01.2013*

⁶² *Brown, 2009; Martin, 2009, Lockwood et al., 2010*

2.3. Design thinking phenomenon within business domain

After mid 2000s, a buzz came across in the business and management realm about design thinking. Both Brown and Martin published their books on the topic in 2009, and later in the same year there were many notable articles in business related journals (see image 2 and 3). The Google Trends search⁶³ shows that the Google search for term design thinking was steadily growing from the beginning of 2004 until the beginning of 2013. In 2009 there were two striking peaks: few days after Brown's book was released in May and few days after Martin's book was released in October (see image 2). The third peak is around November 2009 when the Aspen Design Summit was organized in Colorado, US. The list of participants was truly noteworthy⁶⁴: Brown, Jocelyn Wyatt, Walters, members of world famous design agency frog, editor from Core77⁶⁵.

In March 2010 the business journal The Economist organized a conference called the "The Big Rethink" where design was given a great deal of attention; more than half of the sessions and presentations were related to design. Roberto Verganti, known business and innovation author gave a presentation on design driven innovation, Richard Gillies from Marks & Spencer talked about Marks & Spencer's business design and there were many workshops organized for the participants in order to work on "challenging, hand-on-tasks, participants gain tools to find new solutions to their biggest business challenges"⁶⁶.

63 Google Trends <http://www.google.com/trends/explore#q=design%20thinking&date=1%2F2008%2024m&cmpt=q> Accessed 12.03.2013

64 <http://winterhouse.com/aspen/> Accessed 12.03.2013

65 Core 77, 2013. <http://www.core77.com>

66 The Economist Conferences, <http://www.economistconferences.co.uk/redesigningbusiness/programme2010> Accessed 29.04.2013

- Light green= Contemporary article or blog post
 - Dark green= Contemporary book
 - Grey= Academic journal paper
-

2012

- Korn, Melissa & Silverman, Rachel, Emma:** Forget B-School, D-School is Hot. 'Design Thinking' Gains Traction as More Programs Offer the Problem-Solving Courses

2011

- Hassi, Lotta & Laakso, Miko:** Making Sense of Design Thinking
- Johansson, Ulla & Woodilla, Jill:** Creating a Synergistic Dialogue Among Design Thinking, Strategy, and Innovation
- Walters, Helen:** Design Thinking Isn't a Miracle Cure But Here's How It Helps
- Walters, Helen:** Can Innovation Really Be Reduced to a Process?

2010

- Walters, Helen:** The Value of Design
- Martin, Roger & Riel, Jennifer:** Designing Relationships: Applying Design Interactions at Work
- Brown, Tim & Wyatt, Jocelyn:** Design Thinking for Social Innovation
- Leavy, Brian:** Design Thinking - A New Mental Model of Value Innovation
- Sato, Steve et al.:** Design Thinking to Make Organization Change and Development More Responsive
- Lockwood, Thomas et al.:** Design Thinking. Integrating Innovation, Customer Experience, and Brand Value

2009

- Martin, Roger:** The Design of Business
- Canniffe, Bernard J. et al.:** Business+Design: Exploring a Competitive Edge for Business Thinking
- Drews, Christine:** Unleashing the Full Potential of Design Thinking as a Business Method
- Walters, Helen:** Why Design Thinking Matters
- Wong, Venessa:** How Business Is Adopting Design Thinking
- Brown, Tim:** Change by Design
- Walters, Helen:** Inside the Design Thinking Process
- Merholtz, Peter:** Why Design Thinking Won't Save You
- Martin, Roger:** Design Thinking: Achieving Insights via the "Knowledge Funnel"

2008

- Brown, Tim:** Design Thinking
- Rae, Jeneanne:** P&G Changes Its Game

2007

- Martin, Roger:** Design and Business: Why Can't We Be Friends?

2006

- Borja de Mozota, Brigitte:** The Four Powers of Design: A Value Model in Design Management
- Dunne, David & Martin, Roger:** Design Thinking and How It Will Change Management Education: An Interview and Discussion

2005

- Nussbaum, Bruce:** Getting Schooled in Innovation

Image 2. Timeline of some of the meaningful (for this thesis) business domain related articles, blog posts and books on design thinking from the year 2006 to 2011.

- Light green= Contemporary article, blog post or documentary
 - Dark green= Book
 - Grey= Academic journal paper
-

2013

Norman, Don: Rethinking Design Thinking

2012

Diethelm, Jerry: An Essay on Meaning in Design Thinking

Tjendra, Jeffrey: Why Design Thinking Will Fail

Tsai, Mu-Ming: Design & Thinking (documentary)

2011

Cross, Nigel: Design Thinking: Understanding How Designers Think and Work

Kimbell, Lucy: Rethinking Design Thinking

Nussbaum, Bruce: Design Thinking Is A Failed Experiment. So What's Next?

2010

Boyer, Bryan: Changing the Definition of Design

McCullah, Kevin: Design Thinking: Everywhere and Nowhere, Reflections on the Big Re-Think

2009

Kimbell, Lucy: Beyond Design Thinking: Design-as-Practice and Designs-as-Practice

Watt, Stephen: Questions for Nigel Cross

Provoke Design Oy: Muotoilun Muuttunut Rooli (Eng. The Changed Role of Design)

2008

Sonalkar, Neeraj: Interview with Nigel Cross

Watt, Stephen: Questions for Nigel Cross

2007

Cross, Nigel: Designergly Ways of Knowing

2004

Dorst, Kees: Investigating the Nature of Design Thinking

Oxman, Rivka: Think-Maps: Teaching Design Thinking In Design Education

Image 3. Timeline of some of the meaningful (for this thesis) design and design research related articles, blog posts and books on design thinking from the year 2006 to 2011.

Business schools, managers and business leaders have adopted design thinking in their business curriculum. Dunne and Martin argued in 2006 that the management press had noticed “the potential of design for approaching management”⁶⁷. During the past decade business managers, leaders and students have been enthusiastically gathering sticky notes on the walls of meeting rooms and class rooms in various courses, workshops and master’s programs that are now organized for business professionals, MBA and other business students.⁶⁸ In this chapter the focus is to study why design thinking became so popular within the business and management domains and what benefits design thinking can provide them.

2.3.1. Why business adapted design thinking

Applying design approach to management practise does not seem to be a bad idea: it could enable innovation, organizational change and growth.⁶⁹ The way of working – not only in the design domain - appears to be changing in the world: companies hire professionals with different backgrounds to work together in the same project and consumers are invited to create the products and services together with designers.

Design discipline has expanded from graphic design, architecture and industrial design (among other design disciplines) to designing experiences, strategies and even organizations. The focus is more in the user and creating value to all the stakeholders around a product or a service.⁷⁰ The user is the designer⁷¹.

In business domain, the way of thinking is different from the fast-forward going, iterative design way of thinking and doing. The world is changing

67 Dunne & Martin, 2006. 512

68 Silverman & Korn, 2012

69 Johansson & Woodilla, 2009

70 de Bono, 2003; Johansson & Woodilla, 2009

71 Kimbell, 2009

from an industrial society to a knowledge society, as Dorst summarizes. The problems we have today are complex and ill-defined and require creative solutions.⁷² Martin describes that a traditional firm does not see the quantity of projects they have; they see an ongoing task, which has no beginning or end, as separate projects have. The result is often expensive for the firm and might result people working inefficiently.⁷³ In a design firm the pace is fast, and designers count on quick prototyping and failing fast in order to try again another solution.⁷⁴ The designers think of the possible solutions a problem might have.⁷⁵ One characteristic the design professionals appear to have is that they cope with uncertainty well. It has been suggested that business managers can learn from design professionals in order to at least define a problem even when there is no certain solution in sight.⁷⁶ Patrick Whitney emphasized at the *Rotman Business Design Conference* in 2005 that the power of design thinking should be separated from the crafting of things to apply to all type of issues on a global scale. And exactly this is what has happened during the past decade. Designers now work together with professionals from other fields of expertise in order to create services and strategies that solve complex problems.

Companies in different areas of expertise find design thinking methodology useful for their organization or business. In the world today the mindset appears to be moving to a different way of working, whether it is because of the economical situation in the world or side affects of technology or just plain trend cycle in methods and processes in organizations, which seem to change from time to time. Now is the moment of co-creation (developing and creation of value to customers created together with the customers, or end-users)⁷⁷ and collaboration: “getting hands dirty together”, after a period of individualism the working community has had during the past decade or

⁷² Dorst, 2004

⁷³ Dunne & Martin, 2006. 513

⁷⁴ Cross, 2007

⁷⁵ Dunne & Martin, 2006

⁷⁶ Lester, Piore & Malek, 1998

⁷⁷ Cruz-Valdivieso et al. 2009. 3

two. Perhaps the overwhelming amount of technology and information that surrounds people is affecting them so that the preferred work method is to work in a team instead of working solo. Design thinking is all about teaming up and finding the right kind of person to complete a team.

One reason for business adapting design thinking might be that the business community and especially education was lacking certain type of people; Dunne for example argued in 2006 that MBA programs were criticized, “For their lack of relevance to practitioners, the values they impart to students, and their teaching methods”⁷⁸. Dunne and Martin imply that around 2006 the management education was going through change; the research produced by the business schools was not relevant for the business practitioner. The typical MBA programs were not sufficient in training managers who can manage.⁷⁹ In 2013, this seems to have changed. The MBA programs now have interdisciplinary teamwork, co-creation and fast prototyping within their curriculum, among other things such as critical thinking.⁸⁰

⁷⁸ Dunne & Martin, 2006. 512

⁷⁹ Dunne & Martin, 2006

⁸⁰ Korn & Silverman, 2012

3. Transformation within design disciplines

The design industry has changed remarkably during the past decade. What used to be graphic design is now called visual design. What used to be industrial design is now divided into service design (intangible) and product design (tangible), and even to experience design (intangible and tangible). There are new terms and what seem to be also new disciplines in design. The transformation from tangible product development to intangible service and strategic design began during the 2000s and now many designers work as consultants with professionals from other fields of domain to solve complex problems and even to create business models for companies and product lines. Kelley and VanPatter propose that designers have become the combining factor for multidisciplinary teams, which are now formed for all sorts of projects across different domains.⁸¹

The transformation of the design industry (to what it is now) began over ten years ago. Julier suggests that during 1980s and 1990s the design practise became more diverse, causing the designers to work alongside with marketing-related sectors with the growing dominance of the brand. According to Julier, the changes in the economy and commerce during those two decades changed the creative industry. He proposes that graphic design with interior design took over some domains of industrial design.⁸² However, the design profession moving closer to business related design problems is rather new; Kimbell emphasises that the peculiar aspect of design thinking is that it is adopted by the managerial discourse, and especially by the business schools⁸³. Strategic design and service design are also adopted as part of business design and organizations, and to some extend, they are more familiar terms to people than the term design thinking. To understand the transformation happened in the recent decade in different design disciplines, these two terms need to be explained more thoroughly because they are closely related to

⁸¹ Kelley & VanPatter, 2005

⁸² Julier, 2000. 27

⁸³ Kimbell, 2011. 287

design thinking and partly also part of it. Particularly these terms seem to be something the interviewees had difficulties in distinguishing them from each other's and from design thinking. The interviewees were asked to explain with their own words the terms service design, strategic design and design thinking, and they gave similar type of explanations to all of them. When asking the interviewees what were the differences between the terms, they all paused and had to think about it for a moment, but the answers were vague. Based on the interviews it seemed that these three terms are very close to each other's and they difficult to distinguish.

3.1. Fine line between service design, strategic design and design thinking

Service design, strategic design and design thinking all use similar type of tools and methods, and they all are used for complex purposes, for example problem solving for public health care issues. Design agencies IDEO and frog both do health related projects using methods and approaches from different disciplines to solve health care problems, sometimes even without any tangible products as outcome.⁸⁴⁸⁵ In service design, the methods are mainly related to the user-led design approach: acting out, figuring the service touch-points, storytelling and prototyping.⁸⁶ In strategic design, the aim is to visualize and understand the “architecture of problems”, as the Finnish Innovation Fund Sitra emphasizes in their introduction.⁸⁷ The methods for strategic design are user research, or user understanding, prototyping and systems mapping and thinking, meaning that the focus is on what is causing something and

84 IDEO, *Project Carrot*. 2009. <http://www.ideo.com/work/project-carrot/> Accessed 30.03.2013

85 Frog, *Project M*. <http://www.frogdesign.com/work/project-m.html> Accessed 30.03.2013

86 Stickdorn & Schneider, 2010

87 <http://www.helsinki.designlab.org/pages/what-is-strategic-design> Accessed 30.03.2013

the designers have to try to ask the right questions.⁸⁸ The methods in both service and strategic design sound very similar to the methods and tools used in design thinking, and therefore drawing the distinguishing line between them becomes difficult. In the following pages the intention is to try to explain the difference between these three terms.

3.1.1. Service design

The term service design is rather new in the design domain; just like design thinking in the context it is now used in. In the 1980s service design was considered as a part of marketing discipline, and it was related to consumer behaviour and the services around the consumer experience. Shostack mentioned the words service and design the first time together in 1984 in an article in the Harvard Business Review.⁸⁹ In 1991 Michael Erlhoff and Birgit Mager brought service design and research in the curriculum of the *Köln International School of Design* (KISD) in the University of Applied Sciences in Cologne, Germany.⁹⁰ In 2002 IDEO added service design as a part of their offering.⁹¹

Few years later in 2004 service design began to be part of the design education in design schools more broadly. Stefan Moritz, who is thought to be one of the pioneers of service design in the design domain, wrote in 2005 that design disciplines were melting and schools and companies were recognizing a need and potential of a new approach in the design practise. He emphasizes that the Cologne design school was offering a multidisciplinary course across thirteen different areas of design. Moritz suggested that the design would move into the direction of multidisciplinary projects to develop holistic concepts.

88 Boyer, Cook & Steinberg. 2011. 15-16

89 Shostack, 1984

90 Moritz, 2005. 66

91 IDEO 2013. <http://www.ideo.com>

⁹²Moritz was definitely right about this and describing the future of design in 2005: the design projects have changed quite notably and many designers now work with multidisciplinary teams tackling with complex problems. Service design however does not only consist of multidisciplinary teamwork for a client, but also working with the client to co-create the user experience. Service design is about designing the experience around the product or the offering. Moritz describes that it is, “About understanding client, organization & market, develop ideas and translating them into feasible solutions and to help implementing them”⁹³. In a way, service design could be described as process design⁹⁴.

The British Design Council describes a service design project as, “A strategic project which uses design techniques thorough client research, collaborative ideas generation and early stage prototyping and testing to deliver services that are built around the real needs of clients, that simplify complex problems and deliver solutions that are future focused and cost conscious”⁹⁵. Also Marc Stickdorn and Jakob Schneider describe that service design approach refers to the design process rather than to the actual outcome of it⁹⁶. Stickdorn & Schneider give examples of service design outcomes such as organizational structures, operation processes and service experiences. Stickdorn & Schneider emphasize that service design is, above all, an interdisciplinary approach, combining the different methods and tools from several different disciplines⁹⁷. The methods and tools for designing services vary depending on the project. Some of the more used methods and tools are mind mapping, service touch-points, creating user personas, user interviews, service blueprints and quick service prototyping.⁹⁸

92 Moritz 2005. 32

93 Moritz, 2005. 38-42

94 Interview with Stenros & Snelders 2012

95 *The British Design Council*, 2011

96 Stickdorn & Schneider, 2010. 14

97 Stickdorn & Schneider, 2010. 29

98 Moritz, 2005. 122-146

3.1.2. Strategic design

Strategy has a long history that originates from military and economics and it is known as a discourse within the management discourse ⁹⁹. Explaining strategic design is not easy. I encountered similar problems when searching for a simple description for the term strategic design and for the term design thinking. Strategic design as a term appears to be as vague as design thinking. Brian Ling, design director at the design agency *Design Sojourn*, describes strategic design as, “A process that takes a very holistic and multi-disciplinary approach to achieving design solutions. In other words, strategic design captures all aspects of a product’s requirements (consumer needs, marketing and business plans, design language, brand identity etc.) and then uses these requirements to influence the final design solution.”¹⁰⁰ One of the interviewees, the director of strategic design at Sitra, Marco Steinberg, describes that strategic design is about bringing design tools to decision-making in order to form the right questions. ¹⁰¹ Summarizing these two views on strategic design, it appears to be a process that uses design tools.

3.1.3. Merging design disciplines

Even if the terminology in design changes, new terms, design buzzwords and disciplines come along; the design methods seem to stay consistent throughout time. The problem in defining the difference between design thinking, service design and strategic design appears to lie somewhere in what type of outcome the project aims for. All three domains have similar type of tools and methods; in all of them the focus is on multidisciplinary teamwork, defining and finding the right questions, and visualizing them. However there is a difference between service design with strategic design

⁹⁹ Johansson & Woodilla, 2009

¹⁰⁰ Ling, 2009

¹⁰¹ Interview with Steinberg, 2012

and design thinking; the last two mentioned are often linked more closely to innovation than service design. Johansson & Woodilla for instance write about the merger of strategy, design thinking and innovation, leaving service design completely out of the framework.¹⁰² Perhaps this is because in service design the final outcome is usually more focused on the end-user experience, when in strategic design the final outcome is related to business management. In design thinking - as understood in the business and management discourse - anyone can think like a designer in order to create practically anything: the final focus could be anything from user experience to innovative product solutions. As Brown describes, “Thinking like a designer can transform the way you develop products, services, processes- and even strategy”¹⁰³. All three domains are closely related to business, and can be used as tools and processes for creating innovation and customer value. Design consultancy IDEO is a good example of how service design, strategic design and design thinking are used in different type of projects. IDEO plays a key role in the design thinking phenomenon and links many key figures (Brown, Martin, David Kelley), things and ideas together. Therefore a case study on IDEO will be presented more throughout in the following section.

3.1.4. Case study: IDEO

IDEO’s work has changed the industrial design and design consultancy industry in the past decade. Through an extremely human-centric design approach, IDEO has moved from product focused design to a service based design work. IDEO became widely known internationally for their four-day shopping cart project in 1999, aired in an episode of the TV channel ABC’s late-night news show *Nightline*¹⁰⁴. In the program IDEO’s multidisciplinary team redesigned a shopping cart in a very fast speed using methods of

¹⁰² Johansson & Woodilla, 2011

¹⁰³ Brown, 2008

¹⁰⁴ IDEO, 2013. <http://www.ideo.com/work/shopping-cart-concept> Accessed 14.11.2012

brainstorming, user research on site and rapid prototyping to create a new type of shopping cart that serves the grocery store clients and staff better. The actual product was not a success, but the working methods of IDEO became widely recognized and the company became very famous after this video. The methods and thinking used in the shopping cart project are now thought to be part of the design thinking methods (multidisciplinary team work, brainstorming, empathy towards users and rapid prototyping). Needless to say, IDEO has a special part in the design thinking phenomenon.

When interviewing Roger Martin for this thesis, he mentioned that in 2003 he was having lunch with Brown. They had been discussing the offering of IDEO for their clients and Brown had been wondering what to do with the clients who come to them asking for problem-solving - consulting - in stead of product design which had been IDEO's main offering before. Martin emphasized that they left the lunch meeting with both pondering this new type of design offering, or design thinking, what the clients were actually asking from IDEO: to solve problems with the designer mind-set.¹⁰⁵

In Martin's opinion the design thinking discussion (within the context it is understood at the moment) started from a lunch date with Brown, and even though it would have not started there, IDEO still posses a great deal in the discussion: Brown, for example, writes an online blog called "*Design thinking*"¹⁰⁶ since August 2008 and he wrote a book on the topic, not to mention Brown's various presentations on design thinking around the world.

The IDEO we know today was founded in 1991 by a merger of three design agencies in Palo Alto, California (US). The key figures of IDEO were then David Kelley, Bill Moggridge and Mike Nuttall, who were the original founders of the merged design agencies.¹⁰⁷ Of these three persons David Kelley is

¹⁰⁵ Interview with Martin, 2012

¹⁰⁶ Tim Brown's blog: <http://designthinking.ideo.com/>

¹⁰⁷ http://www.mckinseyquarterly.com/Lessons_from_innovations_front_lines_An_interview_with_IDEOs_CEO_2185 Accessed 28.03.2013

especially interesting character in IDEO history. He originally founded the *IDEO Product Development* in 1978, and he was the CEO of IDEO until Tim Brown took that position in 2000.¹⁰⁸ Like Brown, Kelley is also one of the key influencers in the design thinking discussion. When *Hasso Plattner* co-founded the *d.school* in 2004, Kelley was there to lead the creation.¹⁰⁹ The *d.school* was a trial for bringing engineers, designers, business people and other professionals from different fields of expertise together to ideate and solve problems together. The school's brochure explains how the school helps to create "t-shaped" students who bring the skills learned at their own field of study to tackle bigger problems with an interdisciplinary team of people. The school emphasizes that they try to create innovators, not single innovations, by using design thinking process as the backbone of the learning experience.¹¹⁰ After the *d.school* opened its doors in 2005, it created a buzz in the design and in the business community. Much similar type of schools and programs began to appear after *d.school*'s opening, and even still recently, in 2012 the *Wall Street Journal* wrote how business schools are adapting the design (thinking) process based learning to their curriculum to solve complex problems. The *Wall Street Journal* article mentions also that not all think of only good things about the "design thinking" based learning. The article mentions Peter Merholz, vice president of user experience at online database start-up Inflection LLC, of Redwood City in California, who comments that the design thinking term can be used for basically everything "as good marketing because it is vague enough".¹¹¹

This is not the first time to hear such comment. There are "non-believers" of design thinking, people who say that IDEO began to sell the term design

108 Steelcase Inc. press release: <http://ir.steelcase.com/releasedetail.cfm?releaseid=371986>
Accessed 28.03.2013

109 <http://online.wsj.com/article/SB10001424052702303506404577446832178537716.html>
Accessed 28.03.2013

110 The *d.school* fact sheet. <http://dschool.stanford.edu/wp-content/uploads/2010/09/dschool-fact-sheet-2012.pdf> Accessed 28.03.2013

111 *Wall Street Journal*, 07.06.2012. Accessed 28.3.2013
<http://online.wsj.com/article/SB10001424052702303506404577446832178537716.html>

thinking in order to sell their services to their clients and prospect clients outside of the usual product development client companies, for example in healthcare and public services. One of the interviewees even said that they “came up” with design thinking to compete with other design agencies doing product development and product design by broadening their service offering, but also to compete with Asian design agencies.

Some of the interviewees suggested that the design thinking buzz was a way to try to force the design competency for Western (or American) design consultancies like IDEO, because the Asian design competence, especially in China, is beginning to be more competitive with the Western design agencies. Some interviewees emphasized that various good design schools exist in Asia, which are also building their competence on multidisciplinary teamwork and design thinking methods. Until the recent years, China was competing with low manufacturing prices but now the Chinese design work itself is getting strongly competitive with the Western design business. Still, some of the interviewees were not completely agreeing with this claim, one of the interviewees mentioned that the Asian design agencies and schools could not compete with the Western design agencies and schools, but he did not explain further why or how.

4. Contradictory design thinking

The design community has not adapted the term design thinking as well as the business and management community. Between the 1970s and present moment, design researches and variety of design community members have researched and discussed design creativity, the designers' design methods and creative thinking. The actual term design thinking might not have been used in such specific way, but the subjects around design thinking (methods, creativity, prototyping, user-centricity, to mention few) have been discussed greatly with different terms until the business community began to use the term 'design thinking' again within their own context.

The problem with design thinking is that it is difficult to explain and people understand it differently. Even though there are commonly understood features in design thinking, there is no coherent meaning for the term. One of the main problems is that design discourse understands the term and concept of design thinking in a distinctive way than the business and management discourse does. In the following chapter, the aim is to emphasize on the inconsistency of the term and concept design thinking.

4.1. Design thinking as action

A "second wave"¹¹² of design thinking discussion began over a decade ago in the mid 2000s with a different tone of voice than how it had been discussed before in the "first wave", mainly within the design discourse. What is in common with the literature from the first and the second wave is that in both there is a fairly notable amount of focus on design methods and processes. Clearly design thinking is very much related to design action, already emphasized in chapter two. When looking for support for this claim it was fundamental to try different sources outside of the typical academic and popular literature,

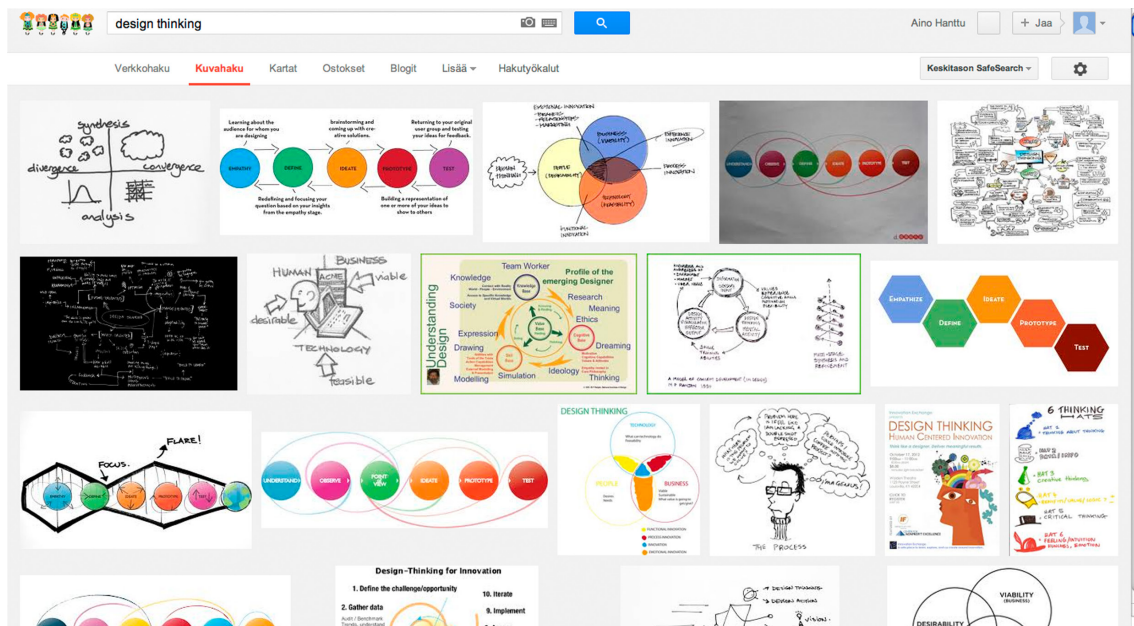
¹¹² Interview with Snelders, 2012

blog posts and online articles. I tried social media and Google search in addition to the mentioned. When conducting a search for images in the social image sharing application Instagram with the word “designthinking”, the phone screen slowly starts to fill with pictures of colourful sticky notes (image 4). Based on my own observations, many non-designers think that design thinking is mainly about co-creation and brainstorming by using sticky notes. This observation is supported in the Instagram image search for the term. In fact brainstorming with sticky notes and teamwork are just tools of design thinking, but many seem to assume that is all there is about it. When doing the same image search on Google browser, the first 25 search result pictures are about brainstorming and mind mapping, and there are couple of sticky notes there too (images 5 and 6).

When typing in ‘design thinking’ in the Google search for pages, the list shows familiar names such as Brown, Martin and Harvard Business Review. Most of the links are related to business rather than design (see image 7).



Image 4. Random search results in January 2013 with the word “designthinking” in Instagram



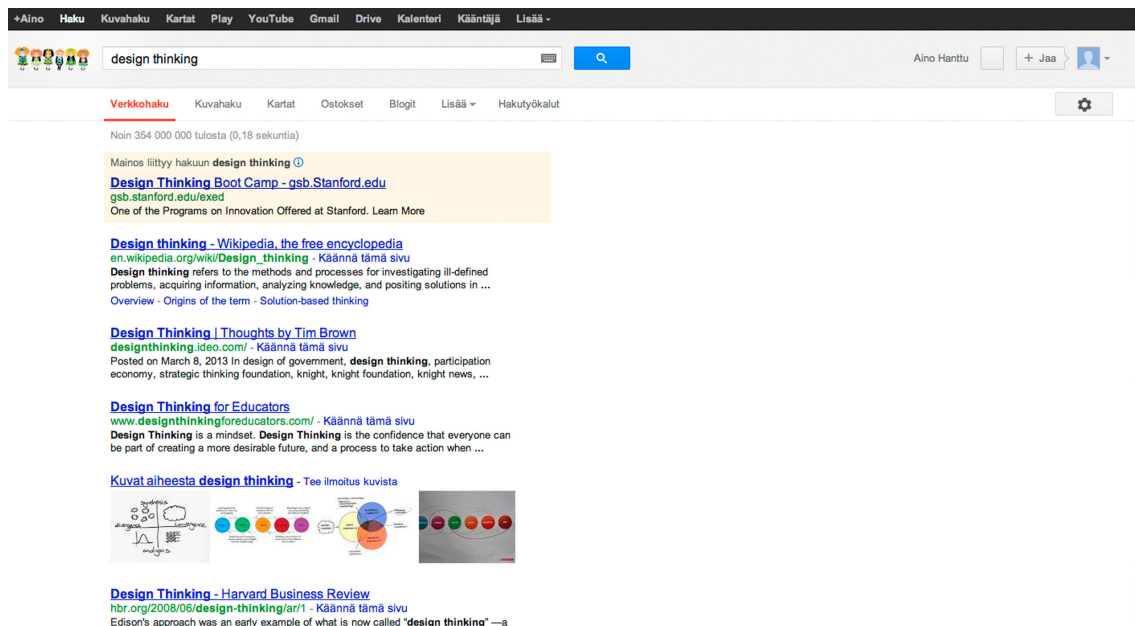


Image 7. First listed search results in Google in March 2013 with words “design thinking”.

4.2. Lack of coherent meaning for the term

There are some design professionals who have adapted the use of the term, and as emphasized already before, Brown presents more the design community than the business community; after all he has a design education in industrial design. Nevertheless the design thinking community within the design community does exist and there are design professionals who participate the design thinking discussion more or less actively. Designers and design researchers share their thoughts and articles about design thinking (or something they believe is closely related to design thinking) in the various online forums and groups, for example the *Design Thinking Network*¹¹³ and the various groups that are for example only in the social professional service

113 *Design Thinking Network*, 2013. <http://www.designthinkingnetwork.com/> Accessed 30.03.2013

LinkedIn. (Conducting a quick search for “design thinking” in LinkedIn, 287 unique search results appear in different languages with the words design and thinking in the name of the group.¹¹⁴) However, when reading through the conversations in the mentioned forums, one thing becomes clear: most of the people attending the discussion do not seem to understand themselves what design thinking is about. As Kimbell concludes: even the people who claim to practice it, do not necessary understand design thinking well ¹¹⁵. I realized the same thing when interviewing people for this thesis.

All the interviewees were asked what they think design thinking is and what they consider as key features of a designer. The responses vary, and there was no common coherent opinion on what design thinking is. When describing the key features of a designer, the answers had more similarities. However, the interviewees described the key features in a similar manner as they described what design thinking is. For example designer has empathy for the user and design thinking is user-centred. Or designer thinks holistically and design thinking is holistic. Also one of the answers was that designer is a problem solver, and design thinking is about solving complex problems. Does this sound familiar? In reality, the methods used in design thinking are the same methods that have been used by the designers practically ever since design has been a profession. Prototyping for instance is something that industrial designers, architects, engineers, interior designers, fashion designers and even graphic designers have been doing throughout the history of design. The designers have always done mock-ups and tests with materials and forms in order to find out if their designs function as they should. Of course quick prototyping with using whatever close to hand (for example sticky notes for quick paper mock ups) might be something a bit more novel, or just more popular now, but not unforeseen. Furthermore, sketching has always been the backbone of design profession; before computers everything was drawn by hand. Now there are designers who cannot seem to draw anymore (they do

114 *LinkedIn*, 2013. http://www.linkedin.com/search-fe/group_search?pplSearchOrigin=GLHD&keywords=design+thinking Accessed 31.03.2013

115 *Kimbell*, 2011. 288

not know how without computer). If some designers do not know how to draw anymore, is it even possible that design is something designers just do or is it way of talking and thinking or even a type of trait design professionals have?

Trait or not, design thinking can be described as the way designers think and work in their profession. Most of the methods and tools designers use are something that can be taught to anyone, after all, most designers learn them at school and or through years of practise.¹¹⁶ Still, there is debate on if the “designerly way of thinking” can be learned, and most of all, if it makes sense for everyone to learn.

As seen in the chapter two, the most difficult issue with design thinking appears to be the problem of explaining the term in a coherent way. Just as in English language the word ‘design’ itself is a noun and a verb, it means to give a form, plan, sketch, and composition, to plan and execute it. Because of these multiple meanings design and designing is hard to define in a simplistic way. Frankly design as a word and as a term brings difficulties to many when discussing issues related to design. The word ‘design’ has such a great amount of different meanings to different people, just like the term ‘design thinking’ has. Lawson describes that the word ‘design’ is used in everyday life but it has particular meanings given by particular groups of people. He also emphasizes also “...‘design’ is both a noun and a verb and can refer either to the end product or to the process”.¹¹⁷ As one of the interviewees, Chinchelli emphasized, the word design has different meanings when it comes to language as well.¹¹⁸ In different languages the meaning changes. For instance, in Finnish language design is translated to *suunnittelu*, which refers to planning more than designing. The term design thinking is translated to *suunnitteluajattelu*¹¹⁹ (in English planning thinking), which in fact sounds

¹¹⁶ Lawson, 2006; Cross, 2007

¹¹⁷ Lawson, 2006. 3

¹¹⁸ Interview with Chinchelli, 2012

¹¹⁹ Aminoff, Hänninen, Kämäräinen & Loiske, 2010

completely different than design thinking in English sounds like.

When it comes to the term ‘design thinking’, I cannot help of thinking that the problem with the definition of design thinking is similar to the problem of defining ‘design’, even though ‘design’ is understood in a similar way around the world in English.

I have heard and seen people using the term design thinking in different ways, “I do design thinking”; “We are a consultancy dedicated in design thinking”¹²⁰. In my own experience some companies also use the term design thinking when describing a design event¹²¹ they have organized, even though the actual event has no reference in “design thinking methods” or way of working. The term is used in a very fluffy way, virtually just to use it as an advertising to attract certain type of people to the events.

When reading and hearing these types of phrases it seems that the words design and thinking go well together for different purposes. As Lawson mentioned, design can refer to the end product or to the process, so it seems legit enough to use the term design thinking in the same way: referring to different things depending on the context.

What happens then if the term ‘design thinking’ lacks the word ‘thinking’ in it? As noticed earlier, the word design has a variety of supplementary words such as strategic (design), environmental (design), eco (design), experience (design) and agile (design), to mention few. The word design alone is not explanatory enough to define what type of design is referred to. The term design thinking has the same type of problem. It is not instructive enough to describe what it is precisely; hence the people understand it in different ways. And the fact that the supplementary word in design thinking is actually thinking, makes the understanding of the term even more difficult. After all, thinking is also a verb and a noun and can be used in various ways and

120 De Ramos and Serch company page <http://deramosandserch.com/> Accessed 09.10.2012

121 “We hope you will join us for food, drinks and a great night of design thinking” (IDEO and First Round Capital describing a start up event in San Francisco on March 14th 2013. <http://designplusstartup5.eventbrite.com/> Accessed 01.04.2013

even understood in different ways. However, the language related research on meaning of the terminology is not within the scope of this thesis.

There are people from distinct backgrounds and with diverse motives giving explanations for what is design thinking and how it should be used in different contexts, creating a variety of “schools” of design thinking. One being the business and management community of professionals using the term design thinking for their variable purposes, outside the typical product development context, as one of the interviewees, Snelders mentioned in the interview.

About a year ago, a documentary about design thinking was presented around the world ¹²². The name of the documentary is *Design & Thinking*, but in fact the documentary was about design thinking, but it could have really been about design and thinking separately, too. The documentary was as confusing as the design thinking term itself is because it did not explain clearly what design thinking was even though many of the key characters of the design thinking phenomenon were interviewed in the film (David Kelley, Bill Moggridge, Roger Martin, Tim Brown and Alex Osterwalder). It seems that all the people interviewed for the documentary have also their own purpose and goal for using the term design thinking.

122 Tsai, 2012

5. Questioning the phenomenon

When Brown and Martin's books came to the market in 2009, design thinking became a widely known term over business and design magazines and online blogs. During 2009 and 2010 the term was used especially in the business related popular literature as Bloomberg's Business Week, Harvard Business Review, Fast Company. It became a hot topic in business and design schools, where design thinking was taught – and still is - in various different courses that use design thinking as a process, way of learning or as a method to create and manage innovation (Aalto University¹²³; Parsons New School of Design¹²⁴; Harvard Business School¹²⁵). There are many people who believe design thinking is connected to innovation and innovating novel products and services¹²⁶ and also organizational change¹²⁷.

As noticed by now in this thesis, design thinking remains as a blurry and very abstract term and it is almost impossible to explain in a way that most of the people following the discussion and phenomenon would agree on its meaning. Is design thinking a fad or has it become its own design discipline with a hint of business thinking in it? Is it similar to service design and strategic design as design disciplines or is it a trendy term that design consultancies use for PR purposes mainly and what business managers think they can use for creating innovation? In the last chapter the goal is to truly understand whether design thinking brings value to designers and businesses and if it can become a design discipline or is it just “a fad”. Bryan Boyer from the Finnish Innovation Fund Sitra asked already a few years back in 2010 if there was a new design practice

123 Aalto University Professional Development, 2013 https://aaltopro.aalto.fi/fi/koulutus/avoin_koulutus/koulutushaku/course/suunnitteluajattelu/ Accessed 03.04.2013

124 Parsons New School of Design, 2013. <http://www.newschool.edu/parsons/masters-design-management/> Accessed 03.04.2013

125 Harvard Business School, 2013. <http://www.hbs.edu/coursecatalog/1345.html> Accessed 03.04.2013

126 Martin, 2009; Leavy, 2010; Tjendra, 2012

127 Sato et al. 2010

evolving¹²⁸. It is a good question, and yet still today very timely.

5.1. Design thinking - something remarkably special?

Design ability has been studied and researched within various design domains and now also within business domain as well. Still we cannot conduct from all this information if design ability is something unique and special; we can only guess and have variety of opinions. As seen in chapter three, design thinking is very closely related to design ability and creativity. Design thinking is both doing and thinking: practising design methods and using design tools, and thinking in designerly ways (“connecting the dots” within a bigger picture, visual ability, asking the right questions in order to solve problems and being emphatic for the end user/s, to mention few examples). Thinking in designerly ways does not apply to every designer in the same way: designers are individuals, and individuals have different characteristics and strengths. One might be skilled in visualizing ideas but not competent in thinking about the big picture, meaning that the person can see the connections between all stakeholders evolved in a way or another in a project for example.

Boyer believes that design thinking is just a renovated definition of what means to be a good designer: “To include systems and strategies as well as enhanced skills in observation, analysis, and communication”¹²⁹. Boyer states that when trying to redefine the practice of design, “We risk a profusion of names for what are essentially just slightly different variations of “good design”¹³⁰. He continues implying that all designers are design thinkers.

Bill Moggridge on the other hand believes that design thinking stems from intuition and that it is a process that has “Evolved gradually by designers of all kinds” and that design thinking can create solutions to problems.

128 Boyer, 2010. <http://etc.ofthiswearesure.com/category/redesigning-design/> Accessed 15.09.2012.

129 Boyer, 2010

130 Boyer, 2010

Moggridge suggests that design thinking is part of bigger entity of design¹³¹. Moggridge among others believes that design ability or design thinking is fundamentally something special, or at least unique, and that non-designers do not have it in the same level as designers do.¹³² Norman believes that the designers have a special ability to iterate: “They take the original problem as a suggestion, not as a final statement” and then think about the problem from different perspectives in order to find the true reason and issues underlying in the problem statement.¹³³ Norman and Moggridge were debating in online blogs in early 2013 about the meaningfulness of design thinking. Norman claimed that design thinking is “A useful myth” used for public relations means and that actually design thinking is just another term for creativity¹³⁴. Moggridge replied to Norman’s blog post in Core77 defending design thinking as “A description of the application of well-tried design process to new challenges and opportunities, used by people from both design and non-design backgrounds”. Moggridge emphasizes that all business leaders should use design and design thinking for innovation and “better results”.¹³⁵ Better results in what, Moggridge does not explain. However, as a conclusion it would be feasible to say that most of the people participating the design thinking discussion, whether they are from business or design domain, appear to agree on the fact that professional designers have certain unique abilities that other people, non-designers, do not have.

5.2. Design thinking - a fad?

Kimbell suggested in 2009 that the critical rethinking of design thinking was still beginning, and it still has not began or evolved to what it could have

¹³¹ Moggridge, 2013

¹³² Brown, 2009; Cross, 2006

¹³³ Norman, 2013

¹³⁴ Norman, 2013

¹³⁵ Moddrigde, 2013

evolved during these past few years. However, many have already participated the critical discussion. During 2010, there was people criticising design thinking, mainly within the design domain.

Van Lancker suggested that, “Concept of design thinking fit perfectly as a solution to the problems faced within the current economic environment”¹³⁶. In 2008 the world faced a worldwide economical crisis, and it still continues to some extend. Keeping this information in mind, the suggestions on design thinking as a fashionable term to use for marketing purposes fit pretty well the picture. Nevertheless, according to Martin, him and Brown discussed about design thinking originally already in 2003 and the first articles on design thinking appeared already before the economical crisis. It is needless to say that Martin and Brown have actually began to prepare their books long before 2008 when both of their books came out to the public. Still many believe that IDEO invented the term to improve their media image in order to get new clients and projects. Olof Schybergson for instance described to me design thinking concepts in the following way:

*“‘Design thinking’ is an artificial construct that has been promoted and pushed for a number of years by a few professional services firms like IDEO – to justify their high rates and win them friends in the upper echelons of large customer organisations. In the process, the term ‘design thinking’ has become a tool in political games, and it has taken on an arrogant meaning, inferring that ‘design thinking’ is by default more valuable and important than any other type of thinking.”*¹³⁷

Some key design thinking supporters have changed their opinion on the value of design thinking for business during the years. Nussbaum for instance declared in a Fast Company Design article a couple of years ago that design thinking was a failed experiment. Nussbaum suggested, “Design consultancies that promoted design thinking were, in effect, hoping that a process trick would produce significant cultural and organizational change.

136 Van Lancker, 2010

137 Discussion with Schybergson, 2012

From the beginning, the process of design thinking was a scaffolding for the real deliverable: creativity.”¹³⁸ Only a month before Nussbaum, the other Business Week’s design thinking ambassador Helen Walters wrote an article on the same magazine Fast Company Design that design thinking will not save a company’s business but it might help to create innovation. Nussbaum’s article followed, but with stronger personal opinions about design thinking and its benefits.

In the interviews and face-to-face discussions for this thesis, almost all (but not everyone) the interviewees believed that design thinking has been a fad and a fashionable term. Design agency Fjord’s CEO Olof Schybergson said that the term design thinking is dying and there are others coming along, for example a term with the words design led in front of it: design led innovation or design led economy. He thought that design thinking is an invented theoretical concept that has been used for public relations of professional design agencies. Emiliano Chinchelli, Experience Design Director at Fjord also believes that design thinking has been a trend and advertising method for a good design agencies, mentioning IDEO as an example ¹³⁹ (Steinberg and Schybergson also felt strongly same way).¹⁴⁰ Boyer from Sitra argues that IDEO was trying to get a new competitive advantage to the service design market by commercializing the term design thinking in fashionable way.¹⁴¹ Also Bill Moggridge mentions in the Design & Thinking documentary, “People talk about design thinking because it is fashionable”¹⁴² . Steinberg however thinks that the problem with design thinking is that it is discussed in such general level. He believes that the outcome of design thinking within the business domain might not meet the expectations people have about it and for this reason it might fail. Tjendra adds that design thinking is not enough alone; for instance it should be combined with equal amount of business

138 Nussbaum, 2011

139 Interview with Emiliano Chinchelli, 2012

140 Discussion with Olof Schybergson, 2012

141 Boyer, 2010

142 Design & Thinking movie. Tchai, 2012

thinking in order to create innovations.¹⁴³

Steinberg emphasizes that design thinking is sort of prisoner of the term itself; it could be something more profound but within the business domain it becomes as “light” phenomenon¹⁴⁴. Also Brown concludes in the *Design & Thinking* documentary - somehow a bit against his earlier thoughts from 2008 - that design thinking is only a term and a starting point for a conversation¹⁴⁵. Adding this to the interviewee’s comments, it feels as if they might be on to something when saying that design thinking was, in fact invented for PR purposes to get new clients and projects and improve the media image of design certain design figures and consultancies. It seems that many design companies and designers have actually benefited from the PR made by some particular design firms: in the interviews the general opinion was that design as a profession is now recognized and valued better and many designers and design companies have in fact been able to widen their service offering from tangible to intangible, and to more challenging projects.

A fad is something that begins rather quickly and the public adapts it fast. Something that can be called fad is popular for a certain period of time and then as quickly as it became popular, it becomes unpopular.¹⁴⁶ Design thinking became very trendy within a certain group of people; first the management realm and then more prominent in business related journals and literature, as well as in popular, general discussion. The discussion and media visibility has decreased and so it can be assumed, that soon the discussion will decrease even more. As Tjendra describes, “The term design thinking has been such a buzzword over the years that its meaning has become diluted by being overly and loosely used by amateur designers and business thinkers. It has come to the point where business owners and executives flee when they hear design

¹⁴³ Tjendra, 2012

¹⁴⁴ Interview with Steinberg, 2012

¹⁴⁵ *Design & Thinking* movie. Tchai, 2012

¹⁴⁶ Bergman, 2003

thinking.”¹⁴⁷

147 *Tjendra, 2012*

6. Conclusions

Design thinking has become a widely examined popular phenomenon during the last decade. The discussion began around 2006, had its most prominent peak around 2008 and continued until 2011. Business and design leaders in North America and in Europe were leading the discussion in online channels such as online blogs and management and business journals, as well as through popular books and academic papers. The key thought leaders in the phenomenon are from different discourses: design discourse and business and management discourse. The two discourses emphasize on different things: design discourse highlights the design thinking research especially how designers act when designing. The design discourse has two phases: the research done before the 2000s and the research done with an additional general discussion on the side during the past decade. Key figures in the design discourse are Nigel Cross and Bryan Lawson with their perceptions and studies on design behavior and the design traits designers have, including the way designers behave when designing. Another key figure is Tim Brown, who has been an active design thinking spokesperson throughout the design thinking phenomenon.

Regardless of Brown's activity within the phenomenon, the design discourse in general appears to be more careful in how they participate in the design thinking discussion.

In the business and management discourse there are a few clearly recognizable key figures that have been proactively discussing design thinking in the design-, business- and management-related media. One of the key figures, Roger Martin, believes design thinking is a combination of analytical and abductive thinking that can help create business innovation, and that anyone can become a designer. And this is also the common thought in the business and management discourse. Design thinking is generally understood as a method or a process to create business value, novel ideas and innovation, whether it is in organization, services or strategy. The problem lies in the

fact that design thinking alone is not able to do this. It can bring creativity to organization but will not alone fix business problems or create innovation. Business modelling, strategy and other fields of domains are needed to create innovation. Design thinking and design can help to achieve it.

Martin, Bruce Nussbaum and Helen Walters have been fairly visible figures in the business and management discourse by giving their support to the concept of design thinking by writing various opinionated articles in journals such as *Business Week* and *Fast Company*.

There has been a debate between the two discourses and between the more public figures of the phenomenon in online blogs. The debate concerns the fact of whether design and especially design thinking is something everyone can learn and practice. The key focus in the design thinking revolution is that business leaders and managers adapted design thinking – design methods, tools and a designerly way of working - as part of their innovation process. In the design community, the common opinion seems to be that designers are naturally design thinkers by profession and that everyone does not have the ability to become a designer or a design thinker by attending a three-day design thinking course.

Although the design community has not entirely adapted design thinking in the context in which the business and management community understands it is, the fact that the companies have adapted design thinking has increased the awareness of design and its possibilities for creating services, innovation, strategies and for general problem solving. Designers and design companies are now called to solve problems in all domains. The design discipline has remarkably changed, partly because of the prominent design thinking phenomenon; it has been given a great deal of media appearance and hence it has been visible for a larger audience. If design thinking has not become its own design discipline¹⁴⁸ at least design thinking has become a melting pot

¹⁴⁸ Walters, 2011

of different design disciplines, such as experience design, strategic design, service design and industrial design. It can be understood as a part of all of these disciplines; the key features of design thinking are also mentioned as key features in these disciplines, at least in some degree. However, there is in fact some common understanding of the key features of design thinking – multidisciplinary teamwork, quick prototyping and user centred design – are used as tools for solving problems in any domain possible. Companies began to loosely add the term design thinking in their service offering and marketing materials, even though there was no common opinion on what design thinking really stands for: is it a process, method, tool or way of thinking.

Design thinking became a fad (something sudden, rapidly spread, quickly accepted and short lived¹⁴⁹) during the past decade in the business and management discourse. The awareness of the term began in early 2008 and design thinking as a term suddenly became very popular in business- and management-related journals. Around 2010, design thinking approach related courses and school programs had a lot of attention, and design thinking became a part of particular MBA programs. Concurrently the hype around the design thinking phenomenon has been decreasing. In 2010, a group of people began to critique the usage of the term design thinking in public ¹⁵⁰. In 2011, a few key supporters of design thinking changed their opinion on the value of design thinking.¹⁵¹ The term was claimed to be fussy and too abstract and some claimed that design thinking was a term used for marketing purposes for well-known design consultancies.¹⁵² But the discussions still go on in both design and business discourse, even though the tone of voice has changed to some extent. The hype that design thinking created in North America and Europe, has started to subside in certain parts of the world, but

149 Bergman, 2003

150 Boyer, 2010; Norman, 2010

151 Boyer, 2010; Norman, 2010

152 Boyer, 2010; Norman, 2010; Tjendra, 2012; Schybergson, 2012; Chinchelli, 2012; Steinberg, 2012

in other parts it seems to still be a point of contention — this conclusion is based on my own observations. I believe that in South America, especially in Brazil, the hype is still beginning, for what I have seen in social media and read generally in business journals lately.

Design thinking continues to be a popular topic in discussions but in a decreasing manner for its loose meaning. In the interview with Martin, it became clear that he believes the design thinking phenomenon is still beginning and that leaders and managers of large companies are becoming more and more interested in design thinking. I am not convinced the design thinking will become its own discipline for creating innovation; more likely it is to be forgotten when another trend or fad comes around, that providing something new and suitable for the present economical moment.

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Interviews

Interviewees

Chinchelli, Emiliano. 19.9.2012 in Helsinki. Chinchelli is the Experience Design Director at Fjord Helsinki.

Martin, Roger. 11.11.2012 in Helsinki. Martin is the Dean of Rotman School of Management at the University of Toronto and the author of the book “The Design of Business”.

Steinberg, Marco. 18.6.2012 in Helsinki. Steinberg is the Director of Strategic Design at Sitra (The Finnish Innovation Fund).

Snelders, Dirk. 31.10.2012 in Helsinki. Snelders is the Associate Proffesor at Eindhoven University of Technology.

Stenros, Anne. 31.10.2012 in Helsinki. Stenros is the Design Director of KONE Corporation.

Also related discussions with

Hill, Dan. 28.2.2012 in Helsinki. Hill, is the Chief Executive Officer of Fabrica.

Schybergson, Olof. 22.3.2012 in Helsinki. Schybergson is the Chief Executive Officer at Fjord.

Attachments: Interviews

- **Attachment 1:** Interview with Marco Steinberg.
- **Attachment 2:** Interview with Anne Stenros & Dirk Snelders.
- **Attachment 3:** Interview with Roger Martin.
- **Attachment 4:** Interview with Emiliano Chinchelli.

Attachment 1: Interview with Marco Steinberg.

1. Aino: *What is design thinking in your opinion?*

Marco: Design thinking is mainly taking advantage of design as a process and it relates to the concept of creativity. At least what I have seen or interpret myself, many people use it when speaking of creativity. E.g. what could be creative business leadership, or what is a more creative product development. It has something to do with the thinking process. If you try to find the meaning for the more general concept (of design thinking), I personally have problems with the concept of creativity; I think creativity is not only something that is used in design or art, there are also very creative chemists, mathematics, etc. The ‘creative sector’ as a concept is quite problematic thing. First we should discuss what kinds of creativity are we talking about, and here design thinking is trying to say that creativity is design-like creativity that connects to decision making and decision making processes. I have challenging relationship with it, because our work (at Sitra) is connected directly to decision-making ... Our work – strategic design, which isn’t either a very good term – is about bringing design tools to decision-making so that we can bring out the rights questions or form the right questions, meaning that we don’t give out ‘wrong briefs’.

If it’s okay, I’ll tell a little bit about my background and myself since I bring in a way a bit cynical point of view on this topic. In my opinion there are two thought schools taking the (design thinking) thing forward: there is Roger Martin in Toronto, and he has been one of the main pro design thinking spokesperson but also IDEO has been talking about this. And since I am cynical about this and if we go back in time 20 to 30 years, the United States and the rest of western countries were competing with the design knowhow, and the rest of the world, countries such as China and all Asia were trying to compete purely with production. And now that they have as good design capabilities as we have, we have invented this thing called ‘design thinking’ for

trying to differentiate from others and that our consults could sell something that the others don't sell. This is a very cynical point of view but there had to be invented something else.

Aino: *Very interesting point of view.*

Marco: Of course this is a completely extreme scenario. To take a bit more positive tone of opinion, I think Roger Martin has been speaking in an interesting way about – I'll simplify his words in a very harsh way now – he thinks – as probably a lot of other people think too – that design should be more useful, it should be better integrated to business. He has thought that if we don't only create products, if the process that leads to a good product is, umm, if the capacity is enough to create a good product. If you think how many firms there are existing, in the US there are 56 design schools of which only a part produces industrial designers to the world, and it's only a few thousand a year that actually graduates to be an industrial designer. Then if you look at the business schools, there are a lot more of them and the amount of alumni's is a lot bigger, is it more useful to take the business knowledge and "bake it in" to the design school or is it more useful to bring design into the business school? If we really want to make an influence, Martin thinks that the design has to be integrated to the business school. I think in here comes the problem that design is simplified to be just a creative process. This is problematic for me because one the fundamental functions of design to me are not only to find the opportunities but also to execute them. And of course to combine the doing with the thinking. I think they go hand in hand. As soon as we start to separate them, thinking that one can think and the other can do, I think at that moment it becomes problematic. If we don't have the knowledge of doing, the thinking becomes restricted as well. This is just roughly what I'm thinking.

Aino: *Well actually these thoughts sound very familiar to me, what I've been reading*

and discussing with people so far, quite a few of them seem to think in a very similar way about design thinking and creativity. In the IDBM program for example, the combination of three different types of students brings out the fact that we understand the taught things in a very different way.

Marco: Well, I feel like I also have problem with they way that the people talk about these things in such a general way. For example, (drawing an pyramid at the same time) if we talk about design thinking in organizations, we've been dealing with a same type of question at Sitra – Sitra isn't a design organization – but we have a small group of designers. Umm, (drawing) ...this is a very narrow way of showing this, but our goal is not to change our entire organization to a design organization – well, in a way yes, but it doesn't mean that everyone will become a designer – for most of the people we just want to create awareness of design. For a core part of the group we want to create understanding of design and because we are an organization in the public sector, these people are the people who make the purchase/buying decisions, and then there are the designers. When we talk about design thinking, is it that we just want to increase the understanding of design in an organization, but we might not have the ability to give this understanding? It's entirely different thing to teach the people to really have this acknowledgement. A person who has been in a twoweek course of design and has done a workshop in a bit different way might think that he or she is suddenly a design manager. For this reason I think it should be thought before hand (when talking about design thinking), what is the purpose of design thinking in a certain context. In what role it is.

The other thought I want to throw into this conversation is that – I'm not sure if this is familiar to you – a Gardner–Hepfer (drawing another image), so during a certain time period the market anticipation for a certain technologic product is born, then it turns to a hype, the people are waiting for the product but it is not ready yet, but the technology or the service is not perfect and they realize that it will not fulfill the expectations of the crowd. Then starts a draft

of the dissolution; even though the product is quite good, the people are so disappointed with it because of the expectations they had that the company decides to withdraw the product from the market. I think this is very similar to – and now I am generalizing design – there's been going on a discussion that design should or will change our lifestyle and business decisions and to create a better society for us, but when I look closer, I don't see it happening. I see the rhetoric's of it but not the genuine change. I think there is a danger in this design thinking that it will become also a draft of the dissolution. And then the design as a theme; design thinking, design leadership, designing or whatever, the door will close for a long time. And even if I haven't been much evolved in this design thinking society, I still know that how people react to design thinking influences to the future of all designers. This, I believe is a huge problem.

Aino: *So, do I understand right, so you're saying that the hype that has been going on now will change to the way people think about design? There will be a change?*

Marco: Yes, because there hasn't been any obvious change in basically anything. Are the business leaders who have a design thinking background now somehow more competitive or better leaders than others without this background? I can't really say.

...

I'd like to go a few steps backwards now if that's ok. I'd like to explain a bit our (Sitra and Helsinki Design Lab) background –you might already be familiar with it – but if I explain this maybe you'll understand better how I position my opinion with things in this way. So, Sitra is works in the public sector and our mission is to create more competitive Finland. The design team's role is in a way to is to bring the design knowledge so we could create wholesome totalities (the big picture). Back in the day we had programs of health care, technology and municipalities and all of them were functioning very separately until we realized that one thing affects another and the other

way around. We needed a multidisciplinary understanding so that we could create better solutions. Our role is to kind shape the big picture; in a way we are the architects for problems. For example in health care there are too many problems. How things are related to each other's; how food is related to the mental health, how work is related to mental health, family, all these things you know.

One problem in the public sector, related to design thinking, is that there are the 'idea people' and the 'people who execute things' and these two groups are very different kind of people. Many times these idea people are consultants who think something, they create a report and they give it to someone else. And as I mentioned earlier, the core problem here is that the actual solution is divided between different people. Many times when there is a report created "from outside", there is a lack of internal cultural organization understanding, and sometimes the barriers are especially there in that level. You can't see it from outside. And then we move towards a world where there are solutions created to cases that haven't existed before, let's say we cut out 50% from the public sector support in the municipalities, then we come front a situation where the health care should work with only half of the money it's been working before. No one has done that kind of health care before. We can't copy anywhere; we can't go – like in the old days – do Denmark to see what they did. We have to create the solution ourselves. In my opinion the only way to do this is that we have some hypothesis, some idea about what we do and then we try it. While we are trying, we form the question at the same time: what the question should be? This iterative prototyping method helps to create the solution. This is why it's a problem to have the idea people and the doing people. The learning cycle disappears when executing the ideas. And this is why design thinking purely as a way of thinking is problematic. Of course a lot of people say "ah design thinking is so much more" but when I take a closer look –and it depends which school of thought you look – it seems to be ideation in a new way.

Aino: *Have you heard of Lotta Hassi? She's an Aalto University researcher, she works in the MIND –project team for example, and she has been studying these different schools of thought in design thinking. She states that there is a management direction (of which Roger Martin being also a part of it) and then there is a design research direction of discussion. Both of these groups think very differently about design thinking, this is what Hassi sees. It's not published yet though.*

Marco: Well I think this is related a bit to that; I have a problem of talking about design in certain groups of people.

Aino: *For example?*

Marco: Well for example in our own organization. The conversation is 'what is design' when it should be talk about design and what it means to health care, for example. I spend too much time in explaining what is design and how to convince the person about design. And then the person straight away reacts: "oh we do the same thing as you do". And then I have to explain how our work is different from theirs.

So I've been trying to avoid the word 'design'. At least in certain places and with

certain people. In the public sector or in the business world the point is not to 'design', the point is just to create better solutions. I don't know if it is of anyone's interested... No wait, I'll take again a couple of steps backwards. My education is in architecture. I am an architect. There are very clear and precise tools and ways of working in architecture. In the end it's quite easy to describe architecture and how it differentiates from other creative work. Ok, we design buildings. Good. We use cuts, different tools and so on. A biologist or a businessman sees straight away how their work is different. Then when we talk about design in a more general level, when a person is educated to be a designer, it all comes a bit more difficult. And then we go to an even more general level to talk about something like design thinking, then there are

suddenly a lot of consultants who say that they do the same work (as designers). I'm not sure if creating a name for this (design thinking) clarifies what it is all about.

Aino: *Personally I think it only makes it more confusing. But I don't know either, that's why I'm here doing this investigation. It could be that I change my opinion in the long run and turn the whole pack around. Let's see.*

...

The interesting thing here is that your background is in architecture, I read the Peter G. Rowe book (1987) about Design Thinking and he talks especially about architects. But in some stuff I read, I kind of read between the lines that the architects are not 'counted' as designers or they are not a part of this design discussion.

Marco: Yes, I have noticed that too. Many times in events or in organizations they talk that there are designers and architects. They go separately.

Aino: *And then some people talk about engineers too, who seem to be in the general view closer to architects.*

Marco: Yes it's related to the education system, I believe that for example in Finland where architecture is traditionally taught in the Technical School of Engineering, in Finland the opinion is formed through that. But for example in the US architecture is mainly taught in the design schools. Maybe in certain places architecture is seen more related to design than to the world of engineering. It's a very culture related thing.

2.

Aino: *We have already discussed about terminology but could you tell me what are the key features in a designer, in your opinion?*

Marco: Uh, not an easy question, but let's see! I have done a very simplified

general description of a designer for Sitra. It's not the best one because it's mainly done keeping Sitra in mind. I can pass it to you by email. I will try to remember it now. First I'll tell you that one and then I will give a more general point of view.

Design is a systemic way of working which by the help of visualization creates human-centred solutions through physical way of working. Well, the first is systemic, and this maybe relates a lot to my own education as an architect, maybe also to designer's profession. When I think about something, I first think about the dimensions and the scale of things. For example Eero Saarinen said once something that I liked. He said that when he thinks about a piece of furniture, he investigates the room, when he thinks about the room he thinks about the building, and when he thinks about the building he thinks about the city. It's kind of like a Russian doll. But this is how it goes. The systematic means how different dimensions meet. How an individual's decision, global things impact and relate to each other's? When you're an architect you learn very quickly that when you do a design in a miniature version, you realize that the ideas don't scale. I mean, I can do a house out of cupboard like this (folding a paper) but when I do it 10-times bigger, it's not enough that the paper is ten times bigger. The building material strengths go to times something not linear.

Aino: *Yes I've come to see that in industrial design as well.*

Marco: Sure, you have the same way of thinking there. The same applies in behaviour, in this room where we are now, the people behave with respect towards each others, and with love, but then if we have a fire suddenly here, the whole group goes into a panic state and people get hurt. An individual's behaviour can differentiate enormously in a group. And sometimes even in a conflict.

So, systemic thinking and the way I describe it in Sitra is that I show the movie made by Ray & Charles Eames, "the Powers of Ten".

Aino: *I haven't seen that one.*

Marco: Please go see it online, it starts with a picnic in Chicago, there's a couple and it's filmed from one meter. Every ten seconds the scale changes. From one meter to 100 meters and so on, as the picture gets bigger there is a person explaining what dimensions a person can walk, or how far a car can go, an airplane. It even goes to the space, as far as we know we can go. And then the camera comes back fast back to the skin of this couple having a picnic. Then again the camera goes as deep as we have a DNA and atoms. And these are the borders of human knowledge. It's a good way to understand how things relate to each other's. So that was systemic thinking; the other thing is "by the help of visualization". I believe it is very important to a designer and you know the word 'design' comes from drawing...

Aino: *Oh yes, I have a thought about that. When there are these consults and businessmen who speak of themselves as design thinkers, but when they are in a meeting... Well I think it's part of being a 'design thinker' is that you can draw and you can bring all the people in the room to same page by explaining – visualizing – what you are exactly thinking. If you can't do that, can you be a design thinker?*

Marco: I used to teach the first year architecture students a long time in the US, and drawing is definitely a very important part of it (design thinking). I had to have multiple conversations with many of the students because they came to the class with the thought in their head that drawing is illustrative; I have an idea and I tell you how it looks like. I tried to explain them that yes, that's the basic level but it's not the reason why we are drawing. We draw because we don't have the ability to think clearly about the thing we have in mind. Drawing is a way of thinking. In the same way as a musician writes notes, he creates distance and analyses it at the same time. He can see something else. If we would have the ability to think, we wouldn't have to draw it. Drawing is a way of thinking. And then we draw things in a way that doesn't really match

the image of the reality or gives us an analytical understanding of things. For example, I draw a cut of a house, but it doesn't exist. No one has ever experienced a "cut" of a house. A house's façade is abstract; it always has a perspective. These are representational or illustrational ways of understanding relations between things. We use these because we don't have the capacity to understand the dimensions otherwise. Drawing, or visualization, but it's not only drawing actually, we can also use animations, and paper mock ups amongst other things. But these tools are always analytical tools that we use, they are not illustrative.

So that's the other thing. (Laughs) Sorry! ...Now the third thing: human-centric solutions. By this I mean also culture related solutions. There has to be always some kind of dimensions with cultural history, history and ethnographic understanding. And the "through physical way of working" means that we combine the systematic thinking and the human-centricity by using the help of visualization but we always in the end our job is to actually do something. To create something, not just to think about things. And it has to be physical, for example if we think about the economists, they think systematically and they do a lot of things that are quite close to what also designers do. They try – at least sometimes – understanding this behavioral economics, they try to understand the behavior, but there are two important things that differentiate: 75% they don't use visualization, and 100% they don't actually do anything. (Both laugh) Yeah, economists think and then afterwards they analyze, they don't have to do.

Aino: *Someone else gets his or her hands dirty!*

Marco: Yes! I say a lot in the US that the designers have the ability to figure (see) big entities and integrate them. As an architect I have a lot of different players to think about: the HVAC system designers, engineers, founders and so on, I create a blueprint, which I pass on to all the key stakeholders. When

I talk about integration, or about multidisciplinary way of working, and even though I think these are fundamental ways of working for me, they are difficult to explain to an outsider of those key stakeholders. Some might say that yes, that's exactly what the business leaders do, I think yes, a managers job is to try to see big picture, how this goes well with that one. I like to use as an example to describe systemic thinking, or visualizing, the march of Napoleon to Moscow. In one of the maps you can see the solders, the temperature and so on. There are so many different dimensions in the picture that you can almost touch the picture.

....

One of the key features in a designer is definitely the ability to iterate, ability to function even if there is not enough information on things... It's a way to work by proposing things, not just working in a purely analytical way. As we know as designers, it is impossible to have all information on everything, but when we have enough of information on something, we can propose an idea. And through those ideas we can test - prototype or iterate - the ideas.

Aino: *And we have to imagination to do that.*

Marco: Yes we have the imagination to combine things. I think these things are difficult to define for an outsider.

Aino: *Also the word 'empathy' is very used when talking about design thinking, which seems to be also something you are describing now.*

Marco: Well when you do human-centric work, and do you work 'at the field', meaning you do ethnographic study; you throw yourself into the situation. But to have empathy... Well there is holistic leadership, which is not necessarily design leadership. You do know that in Germany they have a 'design thinking school'?

Aino: *I've heard about it.*

Marco: Well what I've seen about it is that they bring students with different backgrounds together and it's a multidisciplinary teaching in a very general level. But I don't see the... well I couldn't call that 'design'. It is something in very general level and I believe it gives a lot of benefits too...

Aino: *I think my program, the IDBM – you're familiar with it aren't you? –*

Marco: Yes.

Aino: *And you know where the long name comes from? International Design Business Management...?*

Marco: Yes, it's part of the thought before Aalto University.

Aino: *Yes. I think for example our professors had a thought that they will make us all to be 'design thinkers', and I think in some level it works but when you bring you so many different kind of people from different schools with different thoughts. Then after we finish we get the problem of 'what we will become'?*

Marco: Hah it's a good question! I want to add to that we (at Sitra) work in the public sector and our basic thought is that in there has to be designers in the public sector, to bring the service design, to figure out the big picture, but the problem is that the two sectors –design and the public sector- are so far away from each others. The design community thinks that the civil servants, or clerks, are the most boring people in the world and they think that designers are total freaks. And I think that our education hasn't created a common language for us. I believe that sometimes it is very useful to create these common experiences that brings us together: new areas of functioning and professions.

Aino: *Well true, I agree with you on that.*

Marco: So IDBM and for example Roger Martin's school, I believe they produce something good, I'm not saying that they don't. But the thing is that if it's compared to design or if it mixes the understanding of the meaning of design, well, I'm a bit worried about that.

3.

Aino: *I've been investigating a bit—as a side track- the design terminology for my thesis, and for example the descriptions for 'strategic design' are the same ones many times as what they use for 'design thinking'. You know, I see the same words rolling around there: technology, business and design... Would you like to comment a little bit about the terminology "hype" that has been — of course always — around. You know all this terms, 'sustainable design', and 'ergonomic design'; even the word 'innovation' had its own hype moment.*

Marco: This is why I said in the beginning that I try to avoid the usage of the word 'design' in my organization. I usually start by trying to explain what kind of leadership we are talking about. For example innovation as a concept is quite wide. You know that there are things that are incremental: let's imagine I am a toothpaste manufacturer, and I invent a cork, which is easier to open. It is something different, the idea was born and it's an innovation. It's incremental, and I need people who understand the packaging world and the toothpaste market and the cork technology so well that it is perfectly thought. And they find even 2mm that they can still snap off the size. And the other scenario is that (imagine) I'm in 1967 and I'm Kennedy and I want to go to the moon, and no one has ever done that before. I guess I need a few different types of people around me. And if I find people of big thoughts who question everything... Then if I take the toothpaste people to work on space project that needs people of big thinking, I will go wrong. I would have the wrong people in the wrong project. You know, I think we have to talk about innovation in a far more precise way. In our 'house' (Sitra) I many times ask, "what is our challenge?", "what kind of leadership is needed?". If the challenge is something in what we are so in the beginning of everything, that

we don't understand what is it about... Let's say sustainable development, everyone knows what we are talking about, but we don't truly understand it. Is it something where many things relate to each other's, I mean we are not just talking about umm... biotechnology with cell research, but I mean it's something bigger. Is it something that hasn't happened before, we can't copy from others? We need to go to a 'new world'; we need a certain type of leadership. And I think designers are good in this kind of leadership. I've been trying to start from there. When I joined Sitra in 2008, they asked me "is this design function something new, what should we call it?". I had to really think about it for a long time... On the other hand I'm in a community that is full of financial people, lawyers and so on. I have to communicate somehow to them what we are. I know that in the 1980's there was a term called strategic design in Finland, which was used in the education. And what I've seen –and now I'm criticizing a bit- that that term was used mainly in marketing... It's something that is more used internally in a firm when talking about the business and design in a firm.

So I had to think if that legacy is too heavy for what we are doing, or do we create a new term and then we just explain it every time we use it. We decided that 'strategic design' works for us, and they don't have this kind of legacy of the term in other places around the world, let's say in the US. And I can say that if traditional design is product design, and then our job is to design decision-making. It's different, but it doesn't mean that we are in some way doing marketing or something.

Aino: *A lot of people would imagine that you do service design, but would you still keep it distant to 'designing decision making'? Because I'm sure there are people who would say, "but that's the same thing".*

Marco: I will draw you now two things. Well, I'll draw one thing and I will tell you a stupid story, I hope you haven't heard it yet. So, Denmark in the 1950's, there was a city hall meeting and they were worried because the

citizens stopped going to the public swimming hall. They went there to the swimming hall to see what's wrong, and they realized that the building was in very poor shape. It needed renovation badly. They decided that there was need for a new swimming hall building and they hired an architect. He came a couple of weeks later to the city hall government meeting as his purpose to present the first drafts of the building. But the architect arrived and showed the bus schedule. He said, "you are absolutely right, the building is in bad condition but that's not the problem why people don't go there. The reason is that the public transport's timetables don't match with the opening hours of the swimming hall!" This is the problem at the public sector. There are so many different parts in an organization in the public sector that they can't see the bigger value of things they are trying to create. They try to optimize and maximize the task given inside of their organization... You know bus goes over there, the building is over here and that's it.

When I was in the States, I was working quite a lot with the health care and I realized that in the systemic level there was a lack of design, innovation was happening separately in singular things, such as penicillin or in the operation room, but in how the actual health care works and is coordinated, was lacking thinking behind it. The decision-making about knows how to ask the right questions and understanding how things affect each other's. I can say that in the US they are all the time building more expensive swimming halls and then they think why there is no improvement happening.

So, service design is very important because in the end it's what the end-user experiences. But without the decision-making there is a danger of giving the wrong brief and then designing the wrong solutions. I would say you put lipstick on a pig; I mean we just try to make things look prettier and more efficient. So at the same time when we design services, we have question the process: "are we making the right decisions?" You bring a service designer to the public sector

and the designer takes the existing services and just makes them a bit better. The service designer doesn't have the capability to question how the health

care relates to education or wellbeing or work. But then again the design of decision-making is just theory without service design.

This is what happens when you start –for example- an innovation process, we figure it out in a time scale; we think how to restrict it. And in some point we get a solution. As a designer we are here, and we have to work according to the brief... And how many times I've gotten a totally wrong brief! So what you do? You take it as it is and you try to do what you can... Or you take a few steps backwards, you can actually help the client with the decision-making and say that “even if this was a good brief but maybe you haven't thought everything through, and maybe instead of coffee cup you want a restaurant”. And that is impossible to innovate if you're not there in the situation. We need to understand the relationship between things to make better decisions. So yes, let's go back to the terminology! The term ‘strategic design’ is very challenging and yes, all the terms are very difficult. Mmm, like I said, I don't use the word design anymore. I believe the best way is to do things. I can lecture for hours but it doesn't help anything, if I do something concrete the people realize “ah, I haven't done this before in this way, I haven't understood that you can actually do things in this way”.

Aino: *When I see what you draw and when I listen to you talking, a thought comes to mind that it sounds all very familiar. It sounds what people write about design thinking, you just use different words. I think how to separate thoughts and terms from each other's, is it even necessary to separate and distinguish some of the terms?*

Marco: I would say I see the need to distinguish them, but what they mean concretely, differentiates. Some people think that it's enough that you walk into a company's board and you take a couple of post-its and you create a fun workshop and then in two hours you have an innovation. I see that the same type of effort you need when designing a building. You need to sketch it, prototype it and build it. I can't say how many leaders have been doing ethnographic field study...

Aino: *Well I'm not sure if that many, to tell you the truth.*

Marco: Yeah this might now lead the conversation a bit out of the topic but in my work I see that the people usually have these patterns of behavior. By this I mean that we have meetings in meeting rooms, we use Powerpoint, and when we want to be creative we use post-it notes. We have certain ways to work and I believe a lot of people don't understand how strongly these patterns of behaviour really make us do what we do and how we think. My job is to try to break those patterns. I don't feel comfortable with post-it notes because the task there is to try to find where to place the post-it...

Aino: *...And the actual meaning disappears?*

Marco: Yes very quickly! And you start thinking about thing such as "what if I used the wrong term?". It's not flexible enough for thinking. We have a meeting in a meeting room: Powerpoint is forbidden. So can we bring visualization tools to this process? To truly see things in a different way and to create truly new experiences. And then when I think about design thinking, it's a bit that you know, bringing "a bit of creativity" to the board meeting. But yes, there are similarities between the terminology, between us and consultants and so on. It all starts to mix up as a big chunk.

4.

Aino: *Do you think that there has been a "peak" in the design thinking discussion? Is it just something that someone uses as 'fancy words' to sell their business or is it something that could be actually useful? Are there people who seriously understand what 'design thinking' is all about? Has there been hype? Maybe I'm giving you now a bit too much direction...*

Marco: No, I see what you mean. I really do think there has been a phenomenon around it. And there is a problem, and as I mentioned my

education in architecture, well architecture is very understandable for everyone but design thinking is not like this. It is its strength in a way but also weakness at the same time. And because it has both advantages and disadvantages, it becomes generalized. I'm sure that there are individuals who are much more sophisticated and they understand the term design thinking better, you know like you and me, but most of the people have a much more lighter understanding or thought about it. I think this means that in the world in general there is a better understanding on this kind of 'light' things.

...

When design thinking became to be this kind of fashionable phenomenon, it brought a lot of publicity for the design community and it brought a totally new type of publicity for us, you know that design is not only objects; it is something much more meaningful, for business and decision-making and so on. I know that a lot of my colleagues in big companies have strange relationship to design thinking. But they don't want to talk about it in public, they are happy that they get to the cover of Newsweek. But now the worst hype is starting to pass.

Aino: *Ah yes, I've heard similar words before! And it's funny because I haven't read in too many places that the people feel a bit careful about the design thinking phenomenon, but when I talk to the design professionals they express their mixed feelings about it. It all reveals to me by personal, one-to-one conversations.*

Marco: Yes, there's a lot of this kind of things that the people don't want to write about. They feel distant to these things. If I personally would start using the term 'design thinking' it should be something much more deeper. I have difficulties in finding designers who have a deep understanding of decision making for example in the public sector. It works both ways: the business people have a very strong knowledge on business on the public sector but they lack design and designers lack the financial business knowledge. The talent pool is very narrow.

Like for example in France... there's not created enough of multidisciplinary experiences. Designer will almost always be more capable to work in the design field. How many designers work in the public sector? You can almost count them by one hand.

Aino: *I've noticed also with my degree of studies, that for example where I work at Fjord, they haven't really find the right thing for me to do. They automatically make me do purely 'design' work, when I could actually do other things too. Last year in my IDBM project work we did a public sector work in a multidisciplinary team of four students and the company we worked for was thinking what goes wrong in their business. It took 4 students to come outside of the company to understand that the company management had no understanding of what their clients want and need. We took the clients and the management to a workshop where they had to actually talk to each other's and suddenly they realized that maybe their services are lacking something more personal. They thought the solution would be to give the clients an interior design tool online to make their floor look nicer. What they needed was just to talk with them and give face to things. So I could do so much more, but I walk into a design agency and they say "here's Photoshop, use it".*

Marco: Exactly. There are similar challenges in the academic society, when I was in the academic society, the key question was when the learned things are general knowledge and in what point it turns into specialty? The thought about multidisciplinary work is nothing new, but it's good to question when is the right moment for it? During the first degree it's not necessarily such a good moment, because you're dealing with people who have a general knowledge on business, marketing or something, but it's a lot of general stuff which is not actually yet anything, like a specialty. Sometimes it's better that first those people know something in very deep level and then we start mixing them. Only then they can bring the unique contribution.

Aino: *And maybe it's also good to have already a certain amount of work experience in the field you are an expert in.*

Marco: Exactly, that's the other thing there might be, the people lack of experience. It's not created. We have a small program called design exchange; the meaning of this is to place designers to work at the public sector. Through this we create experience and knowledge for designers. It will be good for the public sector as well, this way in the future we will have more intelligent services.

Aino: *I imagine that there will also be happening a generation change in the public sector in the near future?*

Marco: Yes of course. But the end question of design thinking is to my point of view that do we want to place design into this multidisciplinary way of working and I'm on the side of this kind of thinking – or do we want everyone to become a designer?

And this I don't see as a very useful thing. So that you could do the first one, all the people in the team has to have some sort of understanding on design, so that they can receive it. Is the meaning of this design-thinking phenomenon now something that will create this understanding of design? It's a good thing if it's so. But if design thinking's meaning is to create design leaders, that's bad. And I hope you understand now, I'm now talking in a general level and a lot of people tell me “you know design thinking is not just ‘thinking’”, well, let's invent a better term then and let's start doing things differently! Design thinking is a prisoner of the term I guess too.

...

So, good knowledge in an integrative project, yes! General knowledge to all, not necessary. But if you already have the design knowledge and you can bring more to it, great.

Can I still say something about the US? It's related to education. In the US many of the schools are private and the students have horrible loans when they finish their degree. And because I've been a teacher there, I know that the alumni's are disappointed with their education.

Aino: *Oh really?*

Marco: Yes, and not because they wouldn't have good design education, but because it's so expensive and the working possibilities are so bad. This makes their life very difficult. Many schools have been trying to move their art-design offering a little bit more towards business so that the alumni's would have also better working possibilities in the future. In Harvard for example, there is the school of business, the school of design etc. These schools function with separate funding's. And even if you are an alumni -already graduated- the school can ask you for funds. And the design school can't ask an MBA alumni to fund them you know, and you have a school of which all the big company leaders have graduated from, you can imagine that that school gets more money than the poor little design school! It's very challenging for the schools you know. But if a (design) school can start to place its graduates to professions where there is a possibility to bring back money to the school, it's better for it of course. I think in the US there is a deeper reason, this, why they want to make design thinking more trendy. When the business schools realize that their alumni's are taking their money somewhere else, so many people in the US have a business degree that we start thinking, is it really that useful today in the world. So maybe some Toronto (Rotman School of Management) could differentiate them from other business schools by providing a 'creative business', it makes their education competitive compared to others.

Aino: *I've heard now many times a similar theory that for example IDEO's Tim Brown wants to differentiate –because there are so many design agencies- by inventing this design thinking, you know, to bring a new value to their business.*

Marco: Exactly. And they can sell themselves as something else than only product designers. Now they are competing with McKinsey! And the money flow is bigger than when designing just one product. There are a lot of different type of interests going on. A: I know! The deeper I study this phenomenon,

the more complicated it becomes for me. Let's see what I manage to write in the end...

Ok so I will confuse you a bit more then! When I was visiting the US I got to know Steelcase – the furniture manufacturer- they have a very good and knowledgeable research team. They do the basic research stuff, manufacturing, product materials, what happens in the market etc., and they work quite a lot also with the intellectual properties focusing on the organization. It has nothing to do with the furniture, but how people work more and better. As a team their job is to do some sort of design thinking –some would say- and now, Steelcase bought IDEO a couple of years backwards. It hasn't been discussed very much in the public but IDEO has been a part of Steelcase for some time now.

Aino: *Wow, even I didn't know that.*

Marco: I think part of the reason why Steelcase bought IDEO is that IDEO was doing quite a lot of consulting for hospitals... You know that Steelcase could that way get a better knowledge of what's happening in health care and they could offer their furniture that way.

Well so I was in a meeting where there was Steelcase's own research unit's people and IDEO's design team... they were having very hard time with each others, they had identity problems clearly: how truly does what and from what point of view. If some part of your work is to dig deeper on IDEO it might be interesting to dig a few layers deeper into this and see where the real interests are and for whom. Why Tim Brown has been such a big spokesperson for design thinking? And to go back to the beginning, maybe they need to differentiate from the Chinese design ability because otherwise they have nothing new to offer? And if everyone know in the world has 'design thinking', I can imagine that there will be now the next big thing coming up soon.

5.

Aino: *I have already in a way gotten an answer to my next question but just quickly, do you think there has been major changes in the meaning of design, let's say in the last ten years?*

Marco: Well yes of course. I think there is now a common understanding that if design is integrated –not only in product design- but also in the management level of a company, these companies, in my opinion –and I think there's now enough evidence already- are more competitive than the others that lack design in the decision-making level. A classic example is Braun, and the role of design there. In the public sector they have realized that design and service design is needed. When I was in the US doing the health care project there was a huge lack of system design approach. And in the leadership level, and I mean the governor, state council's and all these people on the top level, they understood that this kind of thinking is needed but they didn't have the talent pool and the knowledge to design this kind of things. And they didn't have the experience of this kind of projects either. I see here a huge opportunity but also a huge gap between the idea and the execution of things. I see that there is a growing understanding of the possibilities of design, but I don't think there has yet been enough change happening.

Attachment 2: Interview with Anne Stenros and Dirk Schelders.

Aino: *I would like to know your opinion on design thinking: what it is for you and how you feel about it (meaning if it is something trendy or relevant...).*

Anne: I have noticed that the business people don't even know about design thinking, they don't care about it. I mean that it is not something that is a part of their vocabulary. It is not on their map. I think design thinking is on the "map" of designers, design agencies, in-house designers and the academia... and very much so. In academia it means also that there are several business people, for example Roger Martin from Rotman School of Business, who push it forward. But it is not known that widely as you might think it is. What do you think Dirk?

Dirk: Well I think about this example I heard on the news yesterday. In Holland we have a new government, and they just formed it. We had really fast negotiations about the coalition, and what they would do in the next four years. And during the negotiations, they had these cards, (that said for example, "these are the things important to me" etc.) and it was kind of a card game. There were only the things they wanted to achieve, and both parties could say, "I am already getting this, but you can get that", and they could trade them so to say. They presented this method as some sort of novelty, but they also thought that it was helping. And I thought that the meeting was facilitated by someone who has been reading about design thinking, and if not design thinking, at least about the materiality of design thinking. I thought it was interesting observation. I think in that perspective, in Holland, in the society in general, when they feel the need to innovate, or they need to be creative, they see a bigger role for prototyping or for doing something different than writing reports. That I think has to do with popularity of things like design thinking. So in that sense, there is an impact, at least what I can see in Holland,

but people do not really know or care where it comes from or what is the idea behind it or why it works.

Aino: *Do you have any type of description for design thinking, how would you describe it?*

Anne: Well in Finnish we don't have a clear translation for that. Muotoiluajattelu or design-ajattelu really is not something we could use.

Dirk: In Dutch is the same thing.

Anne: How I translate that it is actually strategic design: using design as a strategic tool or thinking strategically. Sometimes it is even (for me) the same as for example innovation, depending on the context rather than it (design thinking) being just a concept. For me it is much more open than the design processes. Originally I think the concept (of design thinking) reflects any kind of creative approach but in a systemic way. I mean there is some kind of system, whether you call it process or method, or something... it is not just ad hoc.

Dirk: What is new in the American literature of design thinking is that they apply it to areas outside of product development.

Anne: Oh yes! Like the US army has used it for their crisis areas and it is in their agenda.

Dirk: If you read for example Roger Martin's and Tim Brown's work, a lot of their examples are really, almost deliberately outside the realm of product development. So they introduce it to the business literature making it less specialized.

Anne: I think it has on its behalf made way for both more deeper and wider

understanding on what creativity and innovation is all about. So that it is not a kind of magic trick or just one tool in your toolbox, but it is more kind of change agent... You know, taking different approaches and questioning everything.

Aino: *Anne you say that business people do not really talk about design thinking, what do you think, do your clients know the term... do they ever use it?*

Anne: I do not know, but probably architects are not talking about it! Or developers. They are not talking about design thinking. There are many things still that we keep within the discipline and it opens up to only for those who are within that discipline. I just did an article for the magazine “Tiedepolitiikka” and I write about those old scientists, like Carl Sagan in 1980s in the US, who had his own television show and he explained the birth of the universe. I noticed that many people say that it was so inspirational program for them when they were young, that they started to think scientist as a career. I think that, today we lack are that kind of personalities who open up importance and meaning of science for general audience. And in the same way we do not have that kind of personalities in design, who are speaking on behalf of design to the general public so that they will understand why it is important and what is important there... And how it can help you in the everyday life. The World Design Capital has done partly that in Finland. But then on the other hand it has not given that much for the professionals, at the same time! The people who can breach the gap between professional understanding and unprofessional, popular understanding... We need that kind of faces! Both for science and for design, as well as for art. Because that will create that change in understanding and in perception. And if I say that not too many people even know about the term design thinking, that is because of this lack of spokespersons.

Aino: *Yes I guess it is a kind of closed circle of people who know and discuss about*

design thinking.

Aino: *Let me go back a bit to your (Anne) definition on design thinking. You talk about strategic design, is the term strategic design different to you than design thinking, or is it the same?*

Dirk: That is a good question.

Anne: Well I know in company level how you build up the strategy, how we develop it and how you get people commit it etc. But I refer here that strategy is more like setting up the vision - of course – and the values and then the steps how to achieve what you want to achieve, within your design team. But at the same time it has to be aligned with the corporate strategies. And that is the tough part because you would like to do some crazy things and on a corporate level you have to fit into that form that has been already decided. And you can be a designer and question everything but that is a tough path... So be careful what you question. Question only the relevant because otherwise it will be an ongoing fight. You get a label of a difficult person.

Dirk: I am just wondering now, because now you just kind of linked design thinking with strategic design... Sometimes I think that design thinking might play a role in terms of critiquing... Sort of the corporate structure, as it has arisen since 1970s and 1980s, the stuff like this based on models of Porter and Kottler, really based, or focused on developing sustaining competitive advantage, so really having the main focus on competition. If you look the role of design in this, then it kind of comes as accessory to strategy. So it just provides the niceties for strategies, so the material things that you need and you can think about them at the end of your decision-making process. And I think design thinking is almost like implicitly – there is little critique on this way of acting, for a company. Because it is very analytical and it does not involve any iteration from real life, from any material stuff you put out there. And in terms of, if you think about the role of prototyping and how important that

is for thinking and for realizing what is it that you are doing. I think in a field like architecture, it has always been aware of ...you know politics can say what they want but yet the architects always do something completely different. I think in our world, and I think that has been a world for design maybe in the 1930s and 1950s in the US and maybe in some other way in Europe as well, I'm not really sure. But that rule for design has disappeared more or less in the 1970s and 1980s, and 1990s maybe even. Design is reclaiming a more powerful position in managerial decision-making (by restating the relevance of prototyping), and that is becoming closer to how architects let buildings "speak" in political decision-making.

In that sense I think there is relationship between design thinking and design strategy, or strategy in general.

Anne: There was actually really interesting news yesterday (several articles), about this new position of Jonathan Ive, because he used to be the head of – senior vice president – of industrial design, but now he is also the head of software. So he has two hats. And they say that he is now actually the number one in the company. He has passed the president of the company because of his portfolio... Because of the value, the importance of his portfolio. I think that he is really in a position claiming that this is design thinking, because he is covering the whole artistic leadership, in whatever they do, tangibles or intangibles. And that is the true meaning, at least in my mind – that you have this power... Why to talk about design thinking if you do not have power to change anything? Because thinking is a verb, meaning that it is something active going on, and supposedly it should lead to somewhere, to an action.

Dirk: Actually Jonathan Ive is an interesting example because – I am not sure if he still is – but he has been a professor at the Northumbria University, in the design school there. I spoke with some people, who were teaching there, and they said that the influence in the school was not exactly in line with what you would expect from him when you read the design thinking literature; it

addressed the relevance (or) the importance of details in design.

Anne: Quite old-fashioned, in that respect?

Dirk: Well yes, in that respect. So it is not just that you prototype quickly and roughly to understand your problems, to understand what the problems really are, but also it feels that the solutions per se they need to be – or better said, you need to go to the very detail of design to just get the mean exactly right. That, I think, might actually become as a criticism on design thinking, especially in the way that it has been practised and preached in the US.

Aino: *Yes I think if you want to know how to critique art, you should know how to draw and understand it first, the same applies to design, you have to know the detailed design practise level to understand the big picture better.*

Dirk: But if you read design thinking literature, and also if you go back to the history, the roots of design thinking, like Nigel Cross and the people in the 1960s and 1970s... For them design was not so much special expertise that you could develop or craft, but it was also like a general capacity of people, the things that people in general have. Everybody can be thought as designer – at some point they design something. And it wants to explore that aspect of design that it could be as a capacity of people. I think design thinking really sits within that framework: so it does not really deal with design expertise so much but is seen as trouble with the design expertise. Especially if we go into the area of craftsmanship - like the work of Richard Sennett for instance – who has been arguing that craftsmanship, design and architecture as well becomes more and more important.

Anne: Now that you mentioned, maybe the future is sort of more about this Jonathan Ive type of approach, in terms of detailing. And if we now also think of this “war” between Apple and Samsung, and this is first time ever

when they said that design has a leading importance in terms that you cannot copy. This might mean that in the future the focus has to be more on detailing and how to make real difference. So I do not know what will happen to design thinking but I think that creative leadership has taken part of that discussion, at least among innovators and some leading design thinkers themselves.

Aino: *There are a growing number of people who say that designers should take a role... or a leadership position in the companies to bring this thinking. But then there seems to be also people who do not agree with that, they say designers do not know how to manage and so on.*

Anne: But their own personal input might be very valuable because of their future orientation. But I think that in the future we have this kind of umbrella called creative leadership, and under that we have the design thinking for several types of tasks and the design, as we know it from the old days. And they are side by side.

Dirk: Also if you think in very practical and political terms as well, if you have these two models of design thinking, then what the question is for the management of design... To what extend the design manager has to have design background and have design expertise? Or to what extend can he be a businessperson who knows about design and who applies design thinking but maybe not so much design practise?

Anne: That is true, good point.

Dirk: And I am not sure if design is going to win that battle. I have done a lot of consultancy for mainly grad students who do projects for companies. And usually there was one expert who knew about design and business - which would be me – and then there would be another expert from the school who would be hands on design practitioner. And I know that when students would

present their work to companies and everybody without a design background would be like “oh wow this is really interesting and good”. Then there would always be this next layer of just looking and seeing what the students have done, and we could not really see so clearly. We had to think maybe even a few days, but the practitioners of design could actually see that straight away that “this line is only straight because it was the easiest line but not the best line”, or “here in A you went a lot to details but the problem is actually here in B, you did not go to the details here in B, why not?” And I have come to appreciate that sort of expertise very greatly over the last 15 years.

Anne: Also I am sort of saying that I am more in the rationalist thinking side of design but frankly when we did the release I was very much hands on because I wanted to see that direction I had in mind. My people (at Kone) they know me and it is very difficult for them to understand what I mean with “new”. You can only do that in an iterative moment, saying when the person is on the right track, “go ahead and do it” or “this is not good, turn around and dig deeper”, in a very detailed level, even when picking up colours and things like that. It is like a good orchestra, they cannot play without the conductor. People tend to think that design thinking equals with service design. Many people think that way: when you talk about service design, you talk about design thinking!

The problem in design is the definition of words and concepts and what kind of content you give to them. It is an endless discussion. If you define it in your own way, you are on the safe side, but just define it somehow.

Aino: *So how to you see service design then? What it is to you?*

Anne: I think it is related to any process. It is systemic design, you know, process design. For example, if we do our design process at Kone, it is a kind of service, right? Because we deliver product design or even sometimes service design, it is more related on how you design processes and systems.

Dirk: For me it is designing parts of social and technical systems somehow.

Anne: Or solutions!

Dirk: Yes. Actually I am supervising a PhD student on service design, and his proposition is something I really agree with, it is that designers need to do something worthwhile in services; they need to look the reality of services. So that means that the touch points that you are making with, any sort of interface that you are building with users or between users and providers or with your providers as well. You need to think about them from a design perspective, and that means you need to think about the materiality, what is it that people come across with, how do they perceive a service through the business cards, the buildings they go in and visit, fashion wear of the people who are providing the service... That sort of stuff.

Anne: I agree that service design is creating a kind of consistency between different channels, and between products and services, and products and channels and the entire message.

Aino: *So how is this different from design thinking?*

Anne: Service design is more like a concrete journey, it is a path. Design thinking is more like a policy behind a culture or set of values. It can even set the values.

Dirk: Design thinking does not really set for itself an application area. Which I think is its main weakness actually. That they sort of present it as a way of thinking that could be applied anywhere and everywhere and its structure is always pretty much the same. Have you come across the work of Kees Dorst?

Aino: *Yes, I have been tried trying to get in contact with him!*

Dirk: That is difficult! Well, I like his work. His main argument is that design thinking is a generic way of approaching problems. In an open way, and sort of reflecting how the consequences are and rethinking what the problem has been in the first place, or should be or should become. But he has an application area - that made him more or less famous in the world - which is design against crime.

I think design thinking has this megalomaniac idea that it applies to everything.

Anne: And then it does not apply to anything.

Dirk: Well then how is it related to design expertise? Because if design expertise is tied to the field of materiality then that is going to be different than in any type of industry you are going to work for; it is different for the elevators, fashion or services.

Aino: *Let's change the topic a bit. Could you define the key features in a designer?*

Anne: I think passion for details for sure.

Dirk: Empathy as well, it is important that you understand how the user feels.

Anne: And curiosity is important, that you are interested in almost everything. You can apply different things to your work one day. Broaden your perspective.

Dirk: Also that you see the beauty of problems. That you see things that are wrong in the world...

Anne: And you get a can do attitude that you can fix them. If something is wrong, fix it! I think designers tend to share this; they see that something is wrong and they think they can fix it.

Dirk: I do now a lot of projects around work related stress. Stress is always thought of this very ugly thing at work and it makes people sick and people die from stress. It is bad. But if you start measuring stress, then you get like heart rates and rising levels and scan brain productivity... Very interesting things.

One of the best student projects that we have had now in the last two years is a project of first year students who just came in. They just tried to visualize stress, and they did something really beautiful, sort of a landscape of ink in water. So every time someone has stress, you could see ink drop into water. After a little while the water is full of different colours of ink. And the people had to look at it, because it was really beautiful to look at. It would be nice wallpaper, it looks good, but at the same time it has this meaning, you know “be aware”.

Anne: But that is about storytelling. Designers, they must be storytellers. Because that is one way to tell a story, so that is captivating and as you said, it sticks into your mind.

Dirk: We had to sell the idea for Phillips and we thought of the title: “the beauty of stress”... That is why I thought about seeing the beauty of problems.

Aino: *Do you think that the design thinking discussion or hype has impacted somehow on designers’ life or in design business?*

Anne: It has done some impact yes, we are talking now more about user centric design and user centric approach. It was partly because of this design thinking discussion. That has changed, but at the same time there has been other issues supporting that. But it has been one of the leading spearheads of that message.

Dirk : That is a good point because it has to do with the recent... If you

look into the design thinking and its second wave - around IDEO and Roger Martin, that sort of movement - it was different from this first wave that was in the 1970s/1980s. The big thing was that there was much bigger emphasis on empathy and user centricity.

Aino: *But user centricity has been all the time in design, right?*

Anne: I think it has been more like usability, in the company level it has been testing usability, does something work or not... and why not. We do not have good measurements for user experience: they vary based on the product, based on the context and then if you measure it, the experience varies on if you have been using something for a month or one year... the user experience changes. If you think about the elevator car, you can measure how people feel about the elevator car interior, but the same time if we know that the lobby is lousy or occupied, people feel much more unsafe in the elevator itself. Not because of the elevator, but because of the lobby. So measuring and evaluating this user experience it is as fuzzy as the term design thinking. And how you measure the end results of design thinking? Who knows! We should consider the measurement in a level of change: how much does it create change? Weather change of behaviour, change in your industry, business, or social impact. There are numerous ways to see what is the impact rather than measuring how much money we bring in. Good design will bring it anyway.

Dirk: I completely agree. One of the worries I have with measuring the effects of design, one of the main problems is that a lot of the effects of design come up after a while. You have to understand what was there before and what did design actually change, how did the change develop because it is a gradual thing. I would not want to have your job now!

Attachment 3: Interview with Roger Martin.

1. Aino: *How did you decide to write the book “The Design of Business”?*

Roger: I would say there are two motivating factors. First one is that it was a follow up to a book I had written a couple of years earlier, called the “Opposable Mind”, which is about integrative thinking. In that book I said that when faced with an unpleasant either/or choice, integrative thinkers come up with a better solution. And that is a creative act. I felt that it was important for me to explain more about that creative act of coming up with something new that does not now exist. I think you have to write actionable stuff and that what I had written was not as actionable as I would have loved it to be and there was a gap.

The other factor was that I had been working with P&G on design since 2002 when A.G. Lafley appointed Claudia Kotchka as the VP of Design & Innovation because they wanted to bring more design into P&G. A.G. asked me to work with Claudia and after working closely with her, I became very interested in the world of design. And I have to say one of the things the world was lacking – not completely but at least was lacking up to some level – was the real, fundamental, conceptual understanding of design. I got to know people like Patrick Whitney, from the IIT Institute of Design in Chicago, and that was his view. He was interested in the world of business and business thinking because he said, “the world of business thinking has gotten more rigorous and willing to say, hey this is how we do it and the design world is still stuck a little bit in the thinking ‘we use our hands to do it’. We have some sort of methodologies but we don’t have much theory about design.”

So from my work there in the world of design, I came away with a feeling that there was not enough written from a conceptual level about how to think about design and what it really was, how did it work and why did it really matter. So I wanted to write a book that overcame that gap.

And the second reason was for how an integrative thinker can come up with a creative resolution.

It is actually interesting how Tim Brown's book and mine came out almost at the same time. Tim is a good friend of mine and both of our books are about design and about design thinking stuff, but they are totally different.... at least I think they are. Tim's book is more about how the design process works at IDEO and my book is more about the fundamental thinking behind design.

Aino: *Did you know Tim Brown was writing his book at the same time as you were?*

Roger: Yes I did. And I thought the books were very complimentary to one another.

2. Aino: *When do you think the business people started to use the term 'design thinking' for the first time?*

Roger: I actually think it came out of a conversation that Tim and I had at my office on August 19th in 2003. We had lunch together and Tim was thinking through that what it meant that, when companies were coming to IDEO to ask them to design user experiences and organizational structures instead of objects as IDEO had mainly focused on formerly. And Tim explained that the companies came to ask them to look at problems at an early stage of a project and he said, "that's a very different conception of what we are at IDEO and we are not sure how to deal with these kind of requests." I used to be a strategy consultant for 15 years before and I was used to that: the people did not come to ask us to design objects but rather design strategies and to solve problems. So I was not uncomfortable at all with that kind of problems. I encouraged Tim to see the clients as, "asking you to apply a way of thinking."

So I think we both walked away from that meeting thinking that there is

something called ‘design thinking’: a way of thinking that brings to bear the properties that you use to design an object to design something abstract like an innovation strategy or a strategy in general. And out of that we became greater friends.

A couple of years later when Claudia Kotchka was starting to worry about the design at P&G, I said that I will work with David Kelley and Patrick Whitney to create for you a 3-day program called “Design Works” where you can take category general managers to think about how to incorporate design into their business foundation in a fundamental way. I would argue that this was a design thinking program because they were thinking about their businesses in a designerly way.

So I think the (usage of the term) design thinking started in the mid 2000’s, and I do not want to claim that we invented the term. I do not think we did, and I think it has been used before in different ways. But the new way of conceptualizing it and all the talk about design thinking since 2003 actually has its origins to that conversation in my office (with Tim Brown).

Aino: *How did the people in the 3-day program react to it?*

Roger: They liked it! It was a pilot so there were many things we needed to improve. The first program was in 2005, from 12th to 14th of December with the global hair care business (such as Pantene, Head & Shoulders etc.). It was a success and put about 7 or 8 more categories through this process in the first half of 2006. We taught the Procter & Gamble facilitators how to facilitate it and then they were on their own. Now I think they have something like 150 creative facilitators within Procter & Gamble.

Aino: *I would like to know what design thinking is to you in your own words.*

Roger: It is the combination of traditional, analytical thinking (inductive and deductive logic) with abductive logic to invent knowledge and create things that do not now exist. But the key thing in these thinking processes is that you have to combine them.

Aino: *What are the key features in a designer in your opinion?*

Roger: Somebody who has a desire to become skilled and an expert at that combination of thinking. Typically they work in a narrow enough domains that they can master the materials in that domain. So you can have graphic designers who can design graphics and there are people like me who can design strategies. So a designer is someone who has the inclination to combine analytical and intuitive thought, traditional logic with abductive logic, and then develop the skills in that domain in a way that builds expertise.

Aino: *So do you consider yourself also as a designer?*

Roger: Well I sort of think I am. I mean I guess that is what I came away feeling and it was very nice for Business Week to decide to put me on their list of 27 most influential designers of the world in 2011. I said to them it was very sweet but they replied “you are very influential in that world”. So I if I think myself as a designer, my medium is strategy: I design strategies.

Aino: *Well where I work we have business people who are called business designers and they do service design together with the designers. So I guess we can all be called designers in someway?*

Roger: Yes if a person is acting in a designerly fashion. To me the medium doesn't matter. You can design in many different media.

Aino: *Could you explain the difference you see between for example service design and*

business design... and design thinking?

Roger: To me design thinking is the more general concept, and service design is something you do well with the use of design thinking. Business design is a broader term because there are a lot of things that could be included as business design: designing business strategies, designing an organization.

Aino: *Do you think there has been “hype” around the term design thinking during the past few years?*

Roger: It is hard to say. What I see is more and more businesses recognizing that they have to do something other than what they are normally doing; to sort of scientifically manage themselves because the more scientifically they manage themselves, the less and less they grow. And they watch these other companies doing things that they feel are not as terribly scientific – or analytical – but are producing good results for them. So I think there are more companies than ever saying, “There have got to be better ways to do things than how we are currently doing them”.

I find it hard to say that design thinking is somehow dying or that the people are not interested in it anymore. There are more and more companies coming to me asking me to go to talk about design thinking.

But there are people saying that this has now become hype and companies have woken up to that reality, but these are the best companies in the world and they are calling me and they are extremely enthusiastic about it. I care that companies are interested about what I have to say, but I am not some kind of steward of design thinking and if design thinking is passé to a bunch of people that is fine with me because as long as companies that are really interested in talk about design, I am happy because I really like talking about design. And I like hanging out with good companies like with Lego and Procter & Gamble. So I am not convinced that design thinking has become a passé, because good and important companies of high level come to me and say, “We need to do

some of this design thinking you are talking about, come teach us how”.

Aino: *Have these companies been calling you more now (during the past year)?*

Roger: I guess more now, although I would say over the last 3-4 years more quite a few. Some of them very recently... three months, six months and some called three years ago. Procter & Gamble for example contacted me ten years ago. I cannot say there is any deceleration, I would say it looks and feels more like an emerging trend.

Aino: *Have you noticed any increasing in the meaning of design in the past years? I mean have the companies somehow “realized” design is good for them?*

Roger: I do not think there is any gigantic demand or desire or design per se, or even design thinking per se on the part of the companies. But the real motivator is innovation. Just satisfy the level of innovation with the design as a tool to help them overcome the innovation challenges that they have. It is sort of a referral demand or knock-on demand, which is, “We don’t have enough innovation, we desperately need more innovation and what we have heard is this thing called design or design thinking, that might help us and so we are interested for that reason.” To them, innovation is the problem and design is a potential solution.

I think that has happened, in a way through the last ten years. I honestly think the real motivator of for all of this is Apple. The companies say, “I want to be like Apple”. And what’s Apple like, they seem to invent things that other people do not think of. And in fact you think traditional research methods serving a bunch of customers and giving them what they say they want, “this seems to work way better, what the hell is that all about”. Then they read that there is this Jonathan Ive and then there is Steve Jobs who is interested in traditional forms of design. And they mix the two up and they come up with

iPod, and the others think it is an interesting and innovative idea. One of the features of innovation is traditionally superb industrial design. So I think they bounce back and forth between thinking about those things as kind of the same because they happen to be in one company. And the other companies say in one way or another, “I want to be innovative as Steve Jobs and design seems to be important therefore I am interested in design and innovation together”.

Aino: *I have noticed that Asia and especially China has been mentioned a few times in articles and discussing I've been following when talking about design. Could you comment a bit the design in/and China?*

Roger: My opinion is that the West has a real design advantage now over China. But that won't last long. And the worst thing we could do is rest on our laurels on that front. And I fear that is what we are doing, we are acting very self-satisfied and that is dangerous. I think there is very deep artistic understanding and appreciation in China and Japan, and when they figure out how to incorporate design into business they will be even more dangerous competitors than they already are.

Attachment 4: Interview with Emiliano Chinchelli.

1. Aino: *What do you think are the key features in a designer?*

Emiliano: Mainly to be an observer: you have to be able to observe, to come with conclusions and form an experience out of that. That's quite high level but so it is if you talk about a designer in general. If you talk about designer as a profession, then you have to be able to transform that into a process that you can share with others. You also need to be able to highlight your conclusion as the best solution possible. The best solution doesn't mean just being functional but it can be also be best relative to aesthetics, or it can be even just emotional... but the best result is often the combination of all. There are different features in a designer but I think, overall, the essence is observation (see what is around and understand what are the key values to base your project on), analyse the context and base you conclusions.

Aino: *I guess you are saying that the key features are that they observe things; you could call that curiosity perhaps as well?*

Emiliano: Well curiosity... Yes it is a "driver" to observation. I think you can be more passive as well. You know, curiosity is intensely emotional. Observation can be passive and with a longer term.

Aino: *Would you say this is something all designers have?*

Emiliano: Curiosity? I think if you want to be called as designer, yes. But I think you can be called a lot of other things too.

...

It is pretty much natural human capability I guess. People ask why design is so wide, but if you can apply (it) to most of what we do, then it's a part of natural way to think, or a natural behaviour. Design is a natural behaviour.

Aino: *But would you say that all people observe and analyse (and design)?*

Emiliano: No, that is part of the profession. But a designer doesn't have to be a professional designer. You know even just a kid can transform a piece of wood or a rock to make it become a game, that's already a design. If you want to sell that word, that's what it is.

Aino: *Sold for 10.000 dollars.*

Emiliano: Tom, five years old, game designer!

...

What I'm trying to say is that in the end you sell the process. You go through a lot of work to create the assumptions and base them on your observations, you know, to have a foundation to motivate your "designs". All designers have to present their work, and the work should speak for itself but mostly, you have to actually talk about what you did. This is how Tom 5yo would describe his game "hey I just took this piece of wood and I hit a rock and I started to play with that" and Tom - 5 years old - game designer would say "we tested different pieces of wood and different lengths, the right piece of wood could even hit this and that and it has this curvature because the kids we know are cooler and they like that kind of wood..." You create a story and you try to make the people to understand what are your reasons and the details needed to deliver the best experience.

Aino: *Can you think of other key features in a designer?*

Emiliano: Yes, plenty. You become "geek" in the area of design you are in or you want to be part of. I can bring you my expertise, and make people understand better what they need. You need skills, and those skills relate to the professional field of the designer.

Also I think passion is a key feature, and lifestyle approach is a plus too. I believe that being a designer is a mental state, a way to live being part of this

modern urban life too.

Aino: *Do you mean that a designer loves what he/she is doing?*

Emiliano: I mean that you embrace life in design. If this fits you and drives you forward because it gives you something, and I mean something more than the salary, then it's you are a designer. That's not always nice and you don't do you what you love, you get to be a part of it and it could drive you crazy. It's not love, it's ...

You have to question yourself in the same way as you question other people and situations. That might make you leave other parts behind.

Aino: *What do you mean by leaving other parts behind?*

Emiliano: Well you know profession tends to push you to do something. You can be a part of that social media crowd (Twittering, trying to express your thoughts in a hope of being defined thought leader) and then you can be someone with a completely different lifestyle that don't want to be part of that at all and being great designer... This social media is full of people talking "whatever" and more people reposting it... Hmm I think I went a bit out of context here.

Aino: *That's all right; you are not the first one to do that!*

...

2. *What is design thinking, in your opinion?*

Emiliano: It's a definition. It's a definition of a current – in Italian we say "corrente di pensiero"- I don't know if that can be defined as philosophy, it's a cultural movement based on a way of approaching questions. When you talk about for example the "Illuminismo", today we might refer to this as trends.

Aino: *So you say design thinking is a trend?*

Emiliano: Yes it's definitely a trend. But not as a pop culture term, I mean more as movement.

...

Design thinking is so trendy today that sounds like an advertisement of a design agency.

Aino: *Do you mean some particular design agency or design agencies in general?*

Emiliano: I guess IDEO of course.

3. Aino: *How would you define the term design thinking?*

Emiliano: Well it is the combination of two basic terms. One of them is very emotional and the other very rational. And the funny thing is that “thinking” is actually the emotional part. Thinking it is what you are doing without realizing you are doing it. The moment that you think about it, you create an emotional feeling of it. BAM! You question yourself! You always question yourself at that point. Thinking is a basic ability for us it is in our nature. What is thinking, am I able to do such thing well – many people are afraid of that too (people question if they are intelligent or not). That's why I like to think that as the emotional word of these two, and “design” is the one that makes you remember how you used to play with Lego's as a child.

Aino: *And that is not emotional?*

Emiliano: Oh yes it's definitely emotional, but I relate it to the process of building things.

Of course there are other aspects to the design thinking movement. I guess the problem with design thinking is that there is a lot of money involved, it's

a huge market and people are starting to abuse it. Design thinking is like the word “cool”, I think people started using “cool” - I have no facts about this – but probably in the 1980s or even 1970s already. And it got to a point that to say you’re cool, is not cool... right?

It does not mean that it’s bad, but it’s something people become to redefine themselves trying to give a cooler explanation for it. And that is what’s interesting about this; it will be interesting to read what other people say about design thinking, because in a way that’s what it is about. Design thinking is a discussion point.

4. Aino: *Could you describe what is service design (in your opinion)?*

Emiliano: Service design aims to create an activity helpful to the user. Service designer is the manager of the design process used, to choose to the right solution. It’s a professional figure that, as a role, it has to manage the design process in all its phases and the people that will be involved in it. The service designer is a manager, he/she does not have the pureness of designer, it’s a managerial role that mainly has to be able to coordinate and maintain a process towards the best result in a project. And service design method, in general, is a compilation of exercises used to allow participants of a team or workgroup to set “observation points”. These multiple points of view are then discussed and the conclusion is to create a helpful service can be than illustrated.

Aino: *You defined some of the key features of a designer in a similar manner.*

Emiliano: Well yes, in this case though, you are mainly aiming towards a helpful service. It’s the iterative process fuelled by observation that’s always there...

Unfortunately prototyping and testing are not a part of all service design projects, because when there is a client paying for the project, they pay until

a certain point. The service design agencies will change the process of selling that as well, I guess.

5. Aino: *So what about business design then, how would you describe it? Or strategic design.*

Emiliano: There is business design and design for business. Business design is when you approach it from a business angle, but you can also use a service design angle to develop or improve a business. Strategic design is when your approach is focused on a competition level. Now you can add the word design everywhere, just like smashing design in everything possible because it's cool. I think this business design is a buzzword.

....

Business design is not always based on good values; I believe one of the essential drivers designers have embedded is the pureness, of the “we will save the world -thing”... Actually design thinking can be applied to anything, even for the most evil things, it started like that! Ha ha! But seriously, design thinking became popular in a context – in design and art schools – and they embedded a bit of social consciousness into it, words like values and human are there for a reason. Unfortunately I think design is not just all good. In business design thinking will bring you to a decision. I mean you can create products that are going to sell millions but they will pollute, or you can cause death to many people because there wasn't budget to do proper testing. In business design the conclusion is always about the business... and business is an attempt to make a profit.

Aino: *You mentioned business design and design for business, are they different to you?*

Emiliano: Design for businesses is when you design a service to develop or improve a business. To use a designed service for a business improvement, right? Or a business project. Well... The point is to increase profits.

6. Aino: *Do you think there is hype around the term design thinking?*

Emiliano: There is hype around the word design.

When I was growing up, designer was someone who was between a sculptor and an architect. There was not really a definition for a designer at the time. Especially because of the misleading meaning of the translation (in Italian “disegnatore”). But then in the 1980s the “designer” mainly was associated with fashion or designers of chairs, the next option was the art director, you know, for advertising oriented propaganda and stuff. So people started to show how cool was to be a in “creative” industry and “designer” became to be hype. The cool designer, you know the conscious guy who is culturally aware and multi-international and drives a cool refurbished old Porche. It was a trend of our society that we were able to somehow transform to become a community, and give us finally a sense of belonging.

But you never know... Who knows what's going to be next?

7. Aino: *Do you think that the meaning of design has somehow changed during the past decade? Or in other words the importance or significance of design.*

Emiliano: Yes definitely. There is more awareness of it.

...

Your questions are pretty vague. It's very difficult to answer them because everyone can build a different opinion on them.

Aino: *Yes I am aware of that. I'm trying to find out your opinions based on your experiences.*

But with this last question, I'm trying to understand if the awareness of design has changed in your opinion, I mean if people and companies understand the design and the design profession better etc. For example if a construction company understands better that design could improve their business.

Emiliano: Well yes definitely. I think that as any other consultancy – because in the end it’s a kind of consultancy service that we are selling - they are asking for your expertise. Since we defined that design expertise is actually based on observations of users, then you will have to have your methods to get them right and it still It does not mean that your conclusions are a hundred percent right. That’s why we iterate and we test, because due to this analytic process you have to “step out” of your point of view, and aim for the most common point of view.

...

Back to your point, yes, there is more awareness of the word design. I think people contextualize design in many ways. So if it’s just a word, yes there is a change, yes the people are more aware of it. If the people also know what it is... I don’t know. It depends on what language you are speaking about design.

Aino: *What about the clients you work for? Have you noticed difference in how they value and appreciate design (for their business) now compared to say 10 years ago?*

Emiliano: I think yes, because most of them associate this design thinking to, you know, these world-changing things such as Facebook or Google. These extremely successful businesses that make a lot of money. Those made them think that it would be interested to try that thing called design. They think that they should start doing the same thing. In a way I think design was sold with these success cases. Now a lot of people talk about technology, of course, it speeds up some things that we are used to do. And definitely with the fast pace that technology has, technology based services are super appealing to investors and it’s all to gain for service and design agencies like Fjord or Frog for example.

8. Aino: *Do you think design thinking (as a process, method or whatever) will bring value to people?*

Emiliano: There is value, it is very important. It's the newest way that drives people to try to make things better. In our society especially, the user-centric approach, brings value serving you and the community around you... Urban Design is Urban Planning focused on people, not on the real estate.

